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 $\frac{\cos(1/x)}{(a+b/x)^{1/2}}$; $2 \cdot 10^{-2}$; $12 \ 345$; 9876 ;
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Astrophysics

A selection from Lecture Notes in Physics

Volume 109

Physics of the Expanding Universe

Cracow School on Cosmology
Jodłowy Dwór, September 1978, Poland

Editor: **M. Demiański**

1979. 39 figures, 15 tables. V, 210 pages
DM 28,-; approx. US \$ 12.50. ISBN 3-540-09562-4

Contents: M. MacCallum: The mathematics of anisotropic spatially-homogeneous cosmologies. – Ya.B. Zel'Dovich: Creation of particles by gravitational field. – N. Caderni: Viscous dissipation and evolution of homogeneous cosmological models. – Ya. B. Zel'Dovich: Cosmological microwave background blackbody radiation and formation of galaxies. – R.B. Partidge: Cosmological anisotropies in the microwave background. – G. DeZotti: Constraints on the possible distortions of the cosmic background radiation spectrum. – G. Dautcourt: A unified treatment of different approaches to clustering of galaxies. – M. Heller: Questions to infallible oracle.

Volume 114

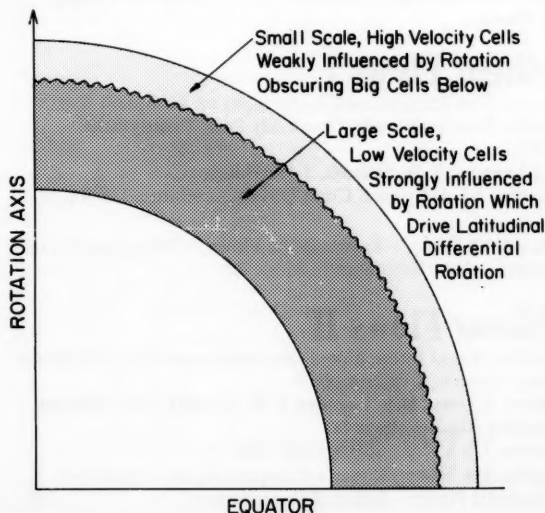
Stellar Turbulence

Proceedings of Colloquium 51 of the International Astronomical Union, Held at the University of Western Ontario, London, Ontario, Canada, August 27–30, 1979

Editors: **D.F. Gray, J.L. Linsky**

1980. 97 figures, 8 tables. IX, 308 pages
DM 37,60; approx. US \$ 16.70. ISBN 3-540-09737-6

Contents: The Physical Origin of Turbulence. – Observed Properties of Stellar Turbulence. – Conceptualizations of Turbulence. – Some Effects of Stellar Turbulence. – Summary.



Volume 125

Nonradial and Nonlinear Stellar Pulsation

Proceedings of a Workshop Held at the University of Arizona in Tucson, March 12–16, 1979

Editors: **H.A. Hill, W.A. Dziembowski**

1980. 135 figures, 39 tables. VIII, 497 pages
DM 57,-; approx. US \$ 25.40. ISBN 3-540-09994-8

Contents: Introduction. – δ Scuti Stars. – β Cephei and Other Early-Type Variables. – Solar Oscillations. – Degenerate Stars. – General Theory. – Keyword Index to Papers.

Volume 147

J. Messer

Temperature Dependent Thomas-Fermi Theory

1981. IX, 131 pages
DM 18,-; approx. US \$ 7.70. ISBN 3-540-10875-0

Contents: Introduction. – The Thermodynamic Thomas-Fermi Limit for Thermodynamic Functions: Ground-State Energy. Canonical and Microcanonical Ensembles. Grand Canonical Ensemble. – The Thermodynamic Thomas-Fermi Limit for Equilibrium States: Correlation Functions. States on a Hydro-Local C^* -Algebra. – Existence of Phase Transitions: Nonuniqueness of Solutions of the Temperature-Dependent Thomas-Fermi Equation. Applications to Astrophysics. – Epilogue. – References.



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Hydrodynamic Instabilities and the Transition to Turbulence

Editors: **H. L. Swinney, J. P. Gollub**

1981. 81 figures. XII, 292 pages. (Topics in Applied Physics, Volume 45).
Cloth DM 96,-; approx. US \$ 41.40. ISBN 3-540-10390-2

Contents: *H. L. Swinney, J. P. Gollub:* Introduction. – *O. E. Lanford:* Strange Attractors and Turbulence. – *D. D. Joseph:* Hydrodynamic Stability and Bifurcation. – *J. A. Yorke, E. D. Yorke:* Chaotic Behavior and Fluid Dynamics. – *F. H. Busse:* Transition to Turbulence in Rayleigh-Bénard Convection. – *R. C. Di Prima, H. L. Swinney:* Instabilities and Transition in Flow Between Concentric Rotating Cylinders. – *S. A. Maslowe:* Shear Flow Instabilities and Transition. – *D. J. Tritton, P. A. Davies:* Instabilities in Geophysical Fluid Dynamics. – *J. M. Guckenheimer:* Instabilities and Chaos in Nonhydrodynamic Systems.

Turbulent Reacting Flows

Editors: **P. A. Libby, F. A. Williams**

1980. 38 figures, 3 tables. XI, 243 pages. (Topics in Applied Physics, Volume 44)
Cloth DM 84,-; approx. US \$ 36.20. ISBN 3-540-10192-6

Contents: *P. A. Libby, F. A. Williams:* Fundamental Aspects. – *A. M. Mellor, C. R. Ferguson:* Practical Problems in Turbulent Reacting Flows. – *R. W. Bilger:* Turbulent Flows with Nonpremixed Reactants. – *K. N. C. Bray:* Turbulent Flows with Premixed Reactants. – *E. E. O'Brien:* The Probability Density Function (pdf) Approach to Reacting Turbulent Flows. – *P. A. Libby, F. A. Williams:* Perspective and Research Topic.

Turbulence

Editor: **P. Bradshaw**

2nd corrected and updated edition. 1978. 47 figures, 4 tables. XI, 339 pages.
(Topics in Applied Physics, Volume 12). DM 49,-; approx. US \$ 21.20
ISBN 3-540-08864-4

Contents: *P. Bradshaw:* Introduction. – *H.-H. Fernholz:* External Flows. – *J. P. Johnston:* Internal Flows. – *P. Bradshaw, J. D. Woods:* Geophysical Turbulence and Buoyant Flows. – *W. C. Reynolds, T. Cebeci:* Calculation of Turbulent Flows. – *B. E. Launder:* Heat and Mass Transport. – *J. L. Lumley:* Two-Phase and Non-Newtonian Flows.

Turbulent Shear Flows I

Selected Papers from the First International Symposium on Turbulent Shear Flows, The Pennsylvania State University, University Park, Pennsylvania, USA, April 18–20, 1977

Editors: **F. Durst, B. E. Launder, F. W. Schmidt, J. H. Whitelaw**

1979. 256 figures, 4 tables. VI, 415 pages. Cloth DM 98,-; approx. US \$ 42.30
ISBN 3-540-09041-X

Contents: Free Flows. – Wall Flows. – Recirculating Flows. – Developments in Reynolds Stress Closures. – New Directions in Modeling.

Turbulent Shear Flows II

Selected Papers from the Second International Symposium on Turbulent Shear Flows, Imperial College London, July 2–4, 1979

Editors: **L. J. S. Bradbury, F. Durst, B. E. Launder, F. W. Schmidt, J. H. Whitelaw**

1980. 310 figures, 12 tables. IX, 391 pages.
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1979-1983 Author Index

Astronomy and Astrophysics
Volumes 71-128Supplement Series
Volumes 36.1-54.3

* Volume and page numbers of articles published in the Supplement Series are printed in italics.

- Aalders, J.W.G. 75, L1; 85, 221; 91, L1; 94, 377; 112, 178 (49, 427); 115, 308
- Aannestad, P.A. 115, 219
- Aarseth, S.J. 105, 21; 114, 41
- Abgrall, H. 117, 172 (50, 505)
- Abraham, Z. 100, L10
- Acampa, E. 107, 414 (47, 485)
- Achterberg, A. 76, 276; 89, 353; 97, 259; 98, 161; 98, 195; 114, 233; 119, 274
- Acker, A. 89, 33; 92, 1; 95, 395 (43, 265); 110, 181 (48, 363); 128, 261 (54, 293); 128, 262 (54, 315)
- Acton, L.W. 111, 125
- Adam, G. 87, 245
- Ade, P.A.R. 116, 130
- Adelman, S.J. 86, 149; 92, 323 (42, 289); 92, 325 (42, 375); 95, 208 (43, 25); 95, 393 (43, 183); 99, 403 (44, 265); 99, 404 (44, 309); 112, 394 (49, 663); 118, 313; 119, 324 (51, 365); 119, 326 (51, 511)
- Adjabshirzadeh, A. 77, 257; 89, 88; 99, 111; 122, 1
- Afanasiev, V.L. 91, 302
- Afraimovich, E.L. 97, 366; 105, L5
- Africano, J. 126, 45
- Agnelli, G. 77, 45
- Agrawal, P.C. 113, 73; 117, 319; 126, 70
- Aharony, U. 79, 27
- Ahlin, P. 118, 210 (51, 143); 125, 391
- Ahmad, I.A. 126, L5
- Aikman, G.C.L. 87, 369
- Aime, C. 76, 324; 79, 1; 97, 114; 99, 232
- Aitken, D.K. 76, 60
- Ajello, J.M. 73, 260; 73, 272; 95, 80
- Akinci, R. 88, 320
- Aksenov, V.I. 91, 311
- Albada, G.D. van 75, 251
- Albernhe, F. 94, 214
- Albrecht, M.A. 127, 409
- Albrecht, R. 91, 261 (42, 9); 106, 379 (47, 221)
- Alcaino, G. 71, 274 (35, 233); 77, 372 (38, 61); 83, 383 (39, 315); 84, 354; 97, 201; 98, 223; 99, 202 (44, 33); 99, 402 (44, 191); 103, 209 (46, 105); 114, 213; 114, 422 (50, 141); 121, 163 (52, 105); 124, 152 (53, 47)
- Aldrovandi, S.M.V. 97, 122; 127, 15
- Alecian, G. 101, 16; 107, 61
- Alexander, J.K. 90, L4
- Alexander, M.E. 73, 227
- Alfaro, E.J. 73, 365 (36, 51)
- Alissandrakis, C.E. 82, 30; 100, 197
- Allamandola, L.J. 77, 66; 77, 261; 86, L1; 109, L12
- Allan, P.M. 127, 254
- Allen, D.A. 107, L5
- Allen, R.J. 71, 272 (35, 163); 73, 366 (36, 135); 74, 73; 74, 366 (36, 135); 78, 217; 81, 167; 82, 207; 84, 181; 93, 106; 104, 127; 115, 373
- Aller, L.H. 115, 217 (50, 209)
- Alloin, D. 71, 335; 76, 257 (37, 361); 78, L5; 78, 200; 81, 172; 93, 362; 95, 394 (43, 231); 101, 377; 105, 335; 112, 257; 117, 172 (50, 491)
- Al-Naimiy, H.M.K. 95, 209 (43, 85)
- Altamore, A. 78, 287; 90, 290; 103, 424; 112, 179 (49, 511); 118, 332; 119, 285
- Altenhoff, W.J. 71, 270 (35, 23); 73, L21; 92, L5; 93, 48; 108, 227; 120, 322; 125, L19
- Alvarez, E. 80, 71; 84, 7; 98, 390
- Alvarez, H. 76, 336
- Alvarez-Falcon, J.M. 89, 291
- Aly, J.J. 86, 192
- Amieux, G. 99, 204 (44, 101)
- Amiot, C. 119, 164 (51, 257)
- Amitai-Milchgrub, A. 77, L7
- Anantharamaiah, K.R. 79, L9; 106, 105
- Anderegg, M. 81, 152; 82, 86
- Anderlucci, E. 121, 142
- Andernach, H. 74, 93; 89, 252 (41, 339); 95, 393 (43, 155); 124, 326
- Andersen, J. 82, 225; 95, 210 (43, 141); 101, 7; 112, 180 (49, 571); 113, 176; 118, 255; 121, 271; 121, 330 (52, 237); 122, 23; 123, 360 (52, 471); 123, 360 (52, 479); 125, 177 (53, 287); 127, 425 (54, 161); 128, 17
- Andersen, T.B. 125, 175 (53, 181)
- Anderson, B. 126, 335
- Andersson, C. 80, 260
- Ando, H. 108, 7
- Andreasen, G.K. 121, 241; 121, 250
- Andrei, A.H. 110, 183 (48, 485); 123, 358 (52, 373)
- Andresen, R.D. 87, 276; 122, 124
- Andrew, B.H. 99, 36
- Andrez, R. 115, 216 (50, 147)
- Andriesse, C.D. 86, 248; 93, 403; 95, 202
- Andrillat, Y. 74, 85; 75, 93; 76, 221; 85, L7; 103, L3; 103, 44; 108, 416 (48, 93); 113, L10; 114, 351; 124, 143; 126, L8; 126, 220 (53, 319)
- Angeletti, L. 74, 57; 85, 113; 96, 254; 98, 344; 102, 250; 103, 424; 118, 332; 121, 183; 121, 188
- Angerhofer, P.E. 92, 225; 94, 313; 115, 428
- Angrand, F. 96, 1
- Anselmo, L. 117, 3
- Antalova, A. 87, 254 (41, 93)
- Antonello, E. 99, 397; 112, 395 (49, 709)
- Antonopoulos, P. 78, 195
- Antonopoulou, E. 120, 85; 123, 358 (52, 381); 126, 221 (53, 347)
- Anzer, U. 83, 133; 122, 73
- Aoki, S. 105, 359; 126, 263; 128, 128
- Apparao, K.M.V. 89, 249; 107, L5; 121, L1
- Appelquist, L. 121, 330 (52, 237)
- Appenzeller, I. 71, 305; 75, 164; 75, 262 (36, 465); 77, 372 (38, 51); 78, 15; 81, 54; 86, 113; 88, 15; 89, 239; 90, 184; 93, 412; 102, 230; 103, 94; 103, 342; 105, 313; 108, 95; 118, 75; 118, 189; 125, 177 (53, 291)
- Ardeberg, A. 73, 370 (36, 317); 77, 269; 77, 277; 83, 383 (39, 325); 86, 268 (40, 307); 91, 53; 91, 261 (42, 1); 98, 9; 115, 347; 128, 194
- Arena, P. 108, 416 (48, 81)
- Arévalo, M.J. 111, 266; 117, 170
- Argyle, R.W. 124, 155 (53, 177)
- Arhipova, V.P. 91, 302
- Arlot, J.-E. 76, L9; 86, 55; 107, 305; 111, 151
- Armstrong, J.W. 103, 415; 123, 191
- Arnal, E.M. 106, 229
- Arnaud, J. 112, 350; 116, 248
- Arnaud, M. 87, 196; 103, 263
- Arnesen, A. 106, 327
- Arnett, W.D. 95, 308
- Arnould, M. 74, 175; 116, 183; 117, 65
- Arp, H.C. 77, 86; 95, 7; 109, 101; 114, 182; 121, 26
- Arpigny, C. 77, L10; 92, 324 (42, 347); 127, L7
- Artru, M.C. 96, 380; 99, 401 (44, 171)
- Artzner, G.E. 89, L8; 93, 415; 100, 205; 103, 160
- Aschenbach, B. 115, 167
- Aslan, Z. 90, 355
- Aspin, C. 91, 97
- Assus, P. 83, 261
- Asteriadis, G. 113, 165
- Athanase, M. 115, 216 (50, 147)
- Athanassoula, E. 87, L10; 88, 184; 97, 63; 105, 76; 107, 101; 111, 28; 121, 297; 127, 349
- Aubier, M.G. 86, 349; 104, 229; 123, 307
- Aubry, D. 88, 283 (41, 229)
- Audouze, J. 75, 371; 80, 276; 82, 234; 90, L13; 91, 49; 93, 1; 127, 164
- Auer, L.H. 88, 302
- Augé, A. 93, 53; 108, 296
- Augustyniak, W.M. 123, 343

- Aurière, M. 100, 307; 106, 179 (46, 347); 108, 334; 109, 301; 118, 210 (51, 135); 123, 358 (52, 383)
- Auvergne, M. 73, 329; 76, 15; 101, 259; 104, 47
- Avni, Y. 90, 44; 102, 12
- Axford, R.A. 81, 363
- Axford, W.I. 111, 317; 125, 204; 152, 204
- Axnäs, I. 87, 20
- Azouit, M. 79, 184
- Azzopardi, M. 72, 380 (35, 353); 75, 120; 75, 243; 81, 387 (39, 19); 90, L17; 95, 191; 114, 422 (50, 119); 117, 171 (50, 291); 123, 159
- Baade, D. 105, 65; 110, L15; 114, 131; 119, 164 (51, 235); 121, 174; 124, 211; 124, 283; 128, 384
- Baars, J.W.M. 89, 180; 101, 39; 124, 116
- Baart, E.E. 92, 156
- Baas, F. 109, L12
- Bååth, L.B. 77, 1; 86, 364; 96, 316
- Bacchelli, L. 73, 370 (36, 309)
- Backus, P.R. 94, L6
- Bacon, R. 128, 405
- Badiali, M. 127, 169
- Baglin, A. 73, 329; 76, 15; 90, 327; 101, 259; 104, 47
- Bahcall, J.N. 115, 242
- Baier, G. 121, 137
- Baiesi-Pillastrini, G.C. 126, 221 (53, 373)
- Baize, P. 81, 389 (39, 83); 99, 402 (44, 199); 119, 325 (51, 479)
- Bajaja, E. 75, 251; 87, 253 (41, 67); 87, 254 (41, 121); 108, 415 (48, 71); 112, 396 (49, 745); 118, 210 (51, 131)
- Bak, B. 97, 192
- Baker, J.R. 74, 93; 100, 220
- Baker, P.L. 71, 272 (35, 129); 75, 54; 94, 85
- Baker, R.E. 117, 38
- Bakker, R. 87, 254 (41, 93); 89, 209; 99, 204 (44, 83); 100, 334 (44, 451); 121, 162 (52, 27); 122, 79
- Balega, Y. 115, 253
- Balick, B. 76, L7; 79, 350; 83, 100; 86, 267 (40, 295); 96, 271
- Balinskaya, I.S. 85, L19
- Balkowski, C. 78, 190; 83, 38; 95, 210 (43, 121); 97, 223; 104, 1; 119, 165 (51, 331)
- Ballarati, B. 100, 323; 119, 165 (51, 321)
- Ballereau, D. 89, 251 (41, 305)
- Balthasar, H. 92, 111; 98, 422; 111, 266; 114, 357; 117, 170
- Baluteau, J.P. 81, 152
- Bandiera, R. 112, 52; 126, 7
- Banhatti, D.G. 84, 112
- Banos, G. 120, 181
- Barambon, C. 96, 189
- Barat, C. 79, L24; 100, L1; 103, 428; 109, L9; 126, 400
- Baratta, G.B. 78, 287; 90, 290; 119, 285
- Barbanis, B. 78, 195; 114, 360
- Barbaro, G. 102, 109
- Barbier, R. 72, 374; 90, 116; 102, 307; 106, 53; 111, 210 (49, 73); 114, 182; 128, 262 (54, 371)
- Barbieri, C. 72, 241; 74, 110; 76, 369 (37, 541); 76, 370 (37, 551); 76, 370 (37, 559); 99, 206 (44, 159); 105, 369; 114, 216; 114, 373
- Barbon, R. 72, 287; 73, 366 (36, 129); 111, 210 (49, 73); 115, 388; 116, 35; 116, 43
- Barbuy, B. 101, 365; 123, 1
- Barcia, A. 122, 219
- Barcza, S. 72, 26
- Bardin, C. 98, 198; 106, 380 (47, 319)
- Barge, P. 109, 179; 109, 228; 115, 8
- Barletti, R. 79, 184; 85, 255
- Bar-Nun, A. 85, 197; 87, 328
- Barranco, M. 125, 6
- Barrett, P.H. 87, 328
- Barros, S. 107, 413 (47, 481); 118, 209 (51, 93)
- Barrow, C.H. 86, 339; 90, L4; 91, 378; 101, 142; 103, 209 (46, 111); 106, 94
- Barsella, B. 111, 130
- Barsuhn, J. 122, 237
- Bartaya, R.A. 77, 372 (38, 69)
- Bartel, N. 84, 260; 87, 282; 90, 58; 93, 85; 97, 384; 100, 91; 106, 180 (46, 421); 109, 340
- Barthel, P.D. 126, 16
- Bartholdi, P. 108, 51; 110, 184 (48, 503); 121, 162 (52, 1)
- Bartkevičius, A. 99, 152; 104, 215
- Bartolini, C. 86, 267 (40, 289); 95, 177; 100, 330; 117, 149; 118, 365; 124, 155 (53, 139)
- Barucci, M.A. 117, 1
- Barwig, H. 114, L11; 124, 287
- Barylak, M. 127, 366
- Baschek, B. 86, L7; 97, 43; 105, 300; 108, 387; 109, 10; 112, 76
- Basko, M.M. 87, 330
- Bassani, L. 122, 83; 125, 52
- Bässgen, M. 111, L1
- Bastiaansen, P.A. 100, 334 (44, 451)
- Bastian, U. 73, 365 (36, 57); 75, L14; 78, 181; 82, 394 (39, 245); 86, 105; 88, L6; 109, 245; 120, 6; 120, 287; 126, 438
- Bastien, P. 93, 160; 94, 294; 98, L4; 108, 417 (48, 153); 119, 109; 128, 279
- Basu, D. 77, 255
- Bates, B. 71, L22; 90, 318; 122, 64; 123, 253
- Bateson, F.M. 110, 182 (48, 383)
- Bath, G.T. 80, 97; 116, 286
- Batrla, W. 96, 202; 110, L20; 115, 185; 119, 139; 124, 322; 125, L19; 127, L19; 128, 279
- Battaner, E. 112, 229
- Battistini, P. 85, 101; 92, 325 (42, 357); 107, 412 (47, 451); 113, 39
- Baud, B. 71, 273 (35, 179); 73, 368 (36, 193); 77, 1; 90, 297; 95, 156; 95, 171; 125, 271; 127, 73; 128, 230
- Baudrand, J. 121, L4
- Baudry, A. 72, 39; 85, 244; 97, 213; 102, 287; 104, 101; 113, 118; 121, 331 (52, 299); 124, 1
- Baur, T.G. 84, 60
- Bazzano, A. 106, 174; 108, 249; 111, 312; 127, 333
- Beall, J.H. 82, 170
- Beattie, D.H. 127, 417
- Beaudet, G. 75, 291
- Beavers, W.I. 92, 214
- Bec-Borsenberger, A. 117, 171 (50, 423)
- Beck, R. 77, 25; 105, 192; 106, 112; 106, 121; 108, 176; 115, 428; 117, 141; 118, 206 (51, 1); 127, 177
- Becker, W. 80, 329 (38, 341); 86, 269 (40, 367); 87, 80; 106, 179 (46, 347); 106, 379 (47, 247); 111, 209 (49, 61); 112, 133; 119, 163 (51, 213); 121, 330 (52, 269)
- Beckers, J. 119, 233
- Beckman, J. 102, 257
- Beckman, J.E. 84, 212; 106, 380 (47, 295); 121, 164 (52, 135)
- Bedijn, P.J. 88, 58; 98, 85; 99, 305; 115, 207
- Bedogni, R. 84, L4
- Beckmans, F. 83, 383 (39, 301); 86, 72
- Beer, H. 103, 189; 105, 270; 123, 279
- Beintema, D. 115, 308
- Bel, N. 73, 174; 78, 129; 104, 203
- Belin, M. 79, 256
- Bell, M.B. 82, 272; 101, L13; 127, 241; 127, 420
- Bell, R.A. 74, 313; 89, 255
- Beltrametti, M. 82, 99; 86, 169; 105, 300; 106, 153; 112, 1; 112, 104; 112, 174
- Belvedere, G. 86, 40; 88, 240; 91, 328; 91, 356; 96, 369; 102, 283; 105, 133
- Benest, D. 84, L11
- Benevides, P. 75, 260 (36, 401)
- Benevides-Soares, P. 96, 127
- Benford, G. 93, 171; 118, 358
- Bennett, K. 90, 163; 91, L3; 93, 71; 105, 164; 128, 245
- Bensammar, S. 72, 186; 83, 261; 126, 427
- Bentley, R.D. 101, 33
- Bentolila, C. 89, 253 (41, 405); 94, 1; 101, 419 (45, 97); 119, 1

- Benvenuti, P. 73, L7; 74, L18; 79, 223; 84, 269 (40, 67); 85, 332; 92, 22; 95, 127; 100, 241; 101, 88; 108, 314; 115, 315
- Benz, A.O. 76, 354; 79, 216; 93, 129; 94, 100; 105, 221; 107, 88; 107, 178; 108, 161; 109, 305
- Benz, D. 124, 116
- Benz, W. 93, 235; 109, 258; 111, 224; 115, 30
- Berezinsky, V.S. 98, 50
- Bergeal, L. 128, 124
- Bergeat, J. 87, 139; 94, 350; 95, 395 (43, 257); 114, 341; 119, 207; 121, 51
- Berger, J. 81, 388 (39, 39); 85, 367
- Bergeron, J. 85, L11; 97, 71; 97, 94; 127, 322
- Bergvall, N.A.S. 71, 270 (35, 55); 95, 266; 97, 302
- Berkhuijsen, E.M. 72, 270; 112, 369; 117, 141; 120, 147; 127, 395
- Berman, R.H. 77, 31; 78, 133
- Bern, K. 92, 324 (42, 335)
- Bernacca, P.L. 75, 61; 89, 214; 94, 345; 122, 17
- Bernard, A. 71, 260; 103, 208 (46, 49); 111, 151
- Bernardi, C. de 71, 270 (35, 63)
- Bernat, A.P. 82, 14
- Bernes, C. 73, 67; 89, 187
- Bernold, T. 91, 262 (42, 43)
- Berruyer, N. 126, 269
- Bertelli, G. 74, 62; 75, 261 (36, 429); 79, 261; 102, 25; 102, 109
- Berthier, G. 100, L14
- Berthomieu, G. 94, 126; 122, 199
- Bertin, G. 88, 289; 106, 274; 108, 265; 127, 145
- Bertola, F. 77, 363
- Berton, R. 127, 140
- Bertotti, B. 121, 203
- Bertout, C. 75, 262 (36, 465); 80, 138; 86, 105; 93, 412; 94, 80; 107, 368; 107, 412 (47, 419); 120, 6; 126, L1
- Bertsch, D.L. 127, 220
- Bester, M. 121, L13
- Bettis, C. 96, 106
- Bettoni, D. 113, 344
- Bettwieser, E. 72, 97; 93, 8; 94, 306
- Bezler, M. 117, 215
- Bhat, P.N. 81, L3
- Bhatia, A.K. 71, 211; 73, 74; 76, 359; 80, 22; 83, 380; 86, 32; 103, 324; 121, 163 (52, 115); 121, 164 (52, 181)
- Bhatnagar, K.B. 82, 163; 91, 194
- Bhattacharjee, S.K. 91, 85
- Bhattacharyya, S.S. 107, 26
- Bianchi, L. 75, 61; 89, 214; 94, 345; 107, 205; 122, 17
- Bianchini, A. 81, 389 (39, 97); 99, 392; 106, 176; 108, 243; 117, 172 (50, 523); 118, 210 (51, 127); 123, 147; 123, 358 (52, 395); 123, 359 (52, 399); 125, 112
- Bica, E.L.D. 102, 245
- Bieging, J.H. 71, 205; 71, 275; 73, 253; 86, 269 (40, 379); 91, 379 (42, 163); 98, L4; 109, 344; 112, 394 (49, 607); 124, 23; 127, 211
- Biehl, D. 92, 70; 92, 325 (42, 391)
- Biémont, E. 84, 361; 87, 242; 107, 166; 108, 127; 112, 337
- Bien, R. 81, 255; 84, L11; 119, 307; 124, L7
- Bienaymé, O. 127, 349
- Biermann, L. 108, 221
- Biermann, P. 75, 7; 75, 19; 77, 25; 79, 245; 81, 235; 86, 11; 117, L5; 119, 80
- Bigay, J.H. 91, 262 (42, 69)
- Bignami, G.F. 87, 85; 90, 163; 91, L3; 93, 71; 94, 116; 105, 164; 107, 390; 115, 404; 128, 245
- Bijaoui, A. 73, 285; 84, 81; 87, 250; 102, 282 (45, 483); 110, L11; 112, 396 (49, 715)
- Bijleveld, W. 111, 50; 125, 217; 125, 223
- Billaud, G. 77, 369
- Binette, L. 115, 315
- Binggeli, B. 72, 378 (35, 271); 82, 289; 107, 338
- Biraud, F. 92, 128
- Biraud, Y.G. 81, 152; 117, 199
- Birch, P.V. 128, 262 (54, 371)
- Birkinshaw, M. 125, 271
- Birkle, K. 108, 274
- Bischoff, M. 95, 395 (43, 259)
- Bisiacchi, G.F. 92, 253; 107, 252; 119, 167
- Bisnovaty-Kogan, G.S. 113, 179
- Blacher, S. 112, 35
- Blackwell, D.E. 79, 48; 81, 336; 81, 340; 82, 249; 112, 209
- Blackwell, S.R. 104, 169 (46, 181)
- Blades, J.C. 71, 359
- Blair, G.N. 94, 259
- Blair, W.P. 99, 73
- Blanco, C. 73, 370 (36, 297); 81, 389 (39, 127); 91, 381 (42, 245); 100, 326; 106, 311; 115, 280; 117, 149
- Blazit, A. 91, 380 (42, 185); 106, 235; 115, 253
- Bleeker, J.A.M. 87, 276; 92, 231; 97, 413
- Block, D.L. 79, L22; 82, 394 (39, 199); 109, 336
- Bloemen, J.B.G.M. 115, 404; 128, 245
- Blum, P.W. 73, 260; 73, 272; 95, 80
- Blumenthal, G. 80, 13
- Bocchia, R. 106, 79
- Boclet, D. 94, 214
- Boczko, R. 75, 260 (36, 401); 96, 127
- Bode, M.F. 73, 113; 78, 78; 89, 158; 123, 301
- Boden, H. 86, 268 (40, 351)
- Bodenheimer, P. 74, 288; 80, 110; 108, 25; 112, 104; 127, 313
- Bodo, G. 114, 394
- Boella, G. 117, 38
- Bogdan, T.J. 122, 129
- Boggess, A. 88, L9
- Bohlin, R.C. 85, 1; 107, 11; 112, 341
- Böhm, K.H. 74, 297; 87, 307; 125, 23
- Böhm-Vitense, E. 92, 219
- Bohn, H.U. 99, 173
- Bohnenstengel, H.-D. 100, 72
- Boissé, P. 76, 259; 94, 265
- Boksenberg, A. 126, 335; 127, 322
- Boland, W. 91, 68; 98, 145; 114, 109
- Bolton, A. 75, 261 (36, 429)
- Bommier, V. 87, 109; 100, 231
- Bonazzola, S. 78, 53; 90, 359; 103, 63; 105, 1; 108, 19; 111, 242; 121, 259; 128, 369
- Bonche, P. 112, 268
- Bond, J.R. 74, 353
- Bond, R.A.B. 123, 111
- Bonneau, D. 80, L11; 80, L13; 86, 295; 91, 380 (42, 185); 92, L1; 103, 28; 106, 235; 115, 253; 120, 263
- Bonnet, R.M. 111, 125
- Bonnet-Bidaud, J.M. 73, 90; 88, 8; 95, L5; 97, 134; 101, 184; 101, 299; 102, 31; 106, 339; 112, 355; 114, 422 (50, 129); 116, 232
- Bonoli, C. 76, 369 (37, 541); 114, 216; 114, 373
- Bönoli, F. 72, 380 (35, 391); 82, 393 (39, 129); 85, 80; 85, 101; 90, L10; 92, 325 (42, 357); 107, 412 (47, 451); 113, 39; 127, 29
- Bonometto, S.A. 82, 287; 92, 222; 123, 118; 126, 377
- Bonsack, W.K. 125, 29
- Bonsignori-Facondi, S.R. 77, 93
- Booth, R.S. 93, 79; 124, L4
- Bopp, P. 74, 369
- Borchkhadze, T.M. 103, 208 (46, 57)
- Bord, D.J. 77, 309; 111, 362
- Borderies, N. 82, 129
- Borgeest, U. 128, 162
- Borgnino, J. 79, 184; 107, 333
- Boriakoff, V. 77, 204; 88, 84; 94, L6; 101, 332; 128, 245
- Börner, G. 77, 178; 83, 133; 122, 73
- Borra, E.F. 94, 134; 111, 117
- Borsenberger, J. 76, 287; 91, 247; 106, 158
- Bortoletto, F. 114, 373
- Bos, A. 98, 251
- Bosma, A. 79, 281; 89, 345; 93, 106; 107, 101; 127, 361
- Bosma, P.B. 126, 283
- Bossi, M. 104, 169 (46, 173); 126, 222 (53, 395); 126, 222 (53, 399)
- Bottinelli, L. 74, 172; 76, 176; 86, 269 (40, 355); 88, 32; 88, 108; 99, 402 (44, 217); 106, 182 (47, 171); 113, 61; 114, 421 (50, 101); 118, 4
- Bouchet, P. 93, 1; 102, L17; 111, 151
- Boudreault, R. 76, 257 (37, 351)

- Bougeard, M. 126, 161
 Bougeret, J.L. 96, 259; 97, 36; 99, 401 (44, 165)
 Boulade, O. 127, 164
 Boulanger, F. 93, L1
 Boulesteix, J. 104, 15; 108, 134; 128, 140
 Bouloy, D. 77, 373 (38, 101)
 Bourgois, G. 102, 212; 123, 207
 Boury, A. 85, 20; 103, 390; 108, 49; 119, 253
 Bouvier, P. 73, 82; 79, 158
 Bowers, M.T. 114, 275
 Bowers, P.F. 99, 203 (44, 63)
 Bowyer, S. 72, L6; 75, 260 (36, 371); 80, 67; 83, L1; 83, 58; 124, 300
 Boyer, R. 86, 267 (40, 277); 106, 181 (47, 145)
 Boyle, D. 104, 57
 Bozis, G. 122, 251
 Bozkurt, S. 73, 365 (36, 65); 85, 265 (40, 145)
 Braccesi, A. 72, 380 (35, 391); 82, 393 (39, 129); 84, L4; 85, 80; 90, L10; 92, 325 (42, 357)
 Bradt, H.V. 89, 249
 Brahic, A. 112, 157
 Branco, G. 94, L19
 Brand, J. 86, L10; 103, 209 (46, 89); 107, 416 (47, 591)
 Brand, P.W.J.L. 71, 47
 Brandt, P. 77, 347
 Brandt, P.N. 109, 77
 Branham, L., Jr. 108, L5
 Brault, J.W. 91, 380 (42, 209); 108, 201
 Bräuninger, H. 115, 167
 Braunsfurth, E. 76, 24; 99, 17; 100, 333 (44, 437); 113, 237; 117, 297; 127, 113
 Bravo, E. 124, 39
 Bray, R.J. 79, 128
 Braz, M.A. 74, 280; 85, 149; 107, 272; 111, 91; 124, 139; 127, 425 (54, 167)
 Breger, M. 78, 11; 90, 18
 Bregman, J.D. 112, L6; 118, 157
 Brenning, N. 87, 20
 Bressan, A.G. 102, 25
 Bretagnon, P. 84, 329; 101, 342; 103, 103; 105, 42; 108, 69; 114, 278
 Breuer, R.A. 96, 293
 Breysacher, J. 75, 120; 75, 243; 81, 387 (39, 19); 87, 349; 90, 207; 93, 394 (43, 203); 95, 191; 95, 394 (43, 203); 96, 120; 123, 159
 Bridle, A.H. 76, 106; 80, 201; 95, 250; 110, 169
 Brinkmann, A.C. 81, 185
 Brinkmann, W.P. 82, 352; 85, 146; 94, 323; 107, 48
 Brinks, E. 95, L1
 Briot, D. 103, L1; 103, 5; 105, 422; 105, 422; 126, 192; 126, 205
 Broglia, P. 76, 368 (37, 487); 85, 265 (40, 135); 100, 201; 104, 170 (46, 185); 118, 209 (51, 97)
 Bromage, G.E. 87, 253 (41, 79)
 Brooks, A. 126, 260
 Broqua, 95, 211 (43, 146)
 Brosch, N. 95, 3; 107, 300; 108, 415 (48, 63); 112, 388; 113, 231
 Brosche, P. 99, 311; 103, 78; 103, 427; 125, 338; 127, 415
 Broucke, R. 73, 303; 112, 305
 Broussard, R.M. 101, 150
 Brown, A.R. 80, L1
 Brown, C.M. 88, 273
 Brown, G.E. 81, 382
 Brown, J.C. 91, 97; 119, 297; 123, 10
 Brown, T.M. 116, 260
 Brown, W.L. 123, 343
 Brown-Kerr, W. 122, 64
 Bruca, L. 115, 280
 Bruch, A. 121, 237; 125, L1
 Brück, M.T. 87, 92; 124, 216
 Bruck, Yu.M. 80, 170; 87, 188
 Brueckner, G.E. 92, L7; 97, 394
 Brugel, E.W. 74, 297; 125, 23
 Bruhweiler, F.C. 106, 137
 Bruner, M. 111, 125
 Bruning, D.H. 81, 50; 115, 203
 Bruston, P. 120, 58
 Buccheri, R. 90, 163; 93, 71; 105, 164; 107, 390; 115, 404; 128, 245
 Buchholz, M. 73, 222; 83, 383 (39, 305)
 Buchler, J.R. 114, 188; 118, 163; 123, 331; 125, 6
 Buczylowski, U.R. 108, 176
 Budding, E. 73, 227
 Buffoni, L. 72, 379 (35, 345); 91, 379 (42, 177); 99, 204 (44, 97); 104, 169 (46, 179); 108, 141; 112, 179 (49, 509); 124, 152 (53, 43)
 Buitrago, J. 118, 345
 Bujarrabal, V. 81, L1; 84, 311; 91, 283; 99, 239; 102, 65; 104, L1; 128, 355
 Bunclark, P.S. 84, 269 (40, 81)
 Bunner, A.N. 78, 287
 Buonanno, R. 101, L1; 107, 412 (47, 451); 113, 39; 118, 209 (51, 83); 124, 151 (53, 1); 126, 278; 128, 94
 Buonaura, B. 111, 113
 Burbidge, G. 118, 154
 Burchi, R. 111, 212 (49, 129); 123, 326
 Burdjuza, V.V. 79, 306
 Burgan, J.R. 78, 65; 94, 373
 Burger, M. 78, 250 (38, 227); 79, 230; 82, 48; 83, 383 (39, 301); 85, 119; 90, 170; 93, 219; 94, 199; 97, 415 (43, 353); 100, 334 (44, 451); 101, 161; 104, 150; 107, 320; 109, 289
 Buriez, J.C. 79, 287; 83, 149; 94, 382
 Burkert, W. 115, 167
 Burkhardt, G. 106, 133
 Burkhardt, C. 74, 38; 92, 13; 92, 132; 103, 145; 107, 416 (47, 595)
 Burki, G. 79, L13; 81, 389 (39, 121); 91, 115; 91, 276; 92, 325 (42, 383); 97, 4; 107, 43; 107, 205; 109, 258; 115, 30; 121, 211; 124, 256
 Burnage, R. 95, 396 (43, 296); 99, 204 (44, 101); 112, 178 (49, 483)
 Burnet, M. 74, 54
 Burton, W.B. 71, 272 (35, 129); 121, 163 (52, 63); 126, 341
 Buscema, G. 118, 209 (51, 83); 124, 151 (53, 1); 126, 278
 Buschauer, R. 118, 358
 Bussoletti, E. 105, 184
 Butchins, S.A. 97, 407; 109, 360
 Butler, R.C. 117, 38
 Butler, S.E. 85, 144; 89, 379
 Butler, S.J. 86, 283
 Button, S. 108, 416 (48, 137)
 Butz, M. 72, 211
 Buzzoni, A. 128, 94
 Bychkov, K.V. 80, 167; 85, L19
 Byrnak, B., 102, L9
 Cabot W. 112, L1
 Caccin, B. 83, 73; 92, 63; 97, 104; 99, 66; 109, 274; 111, 113
 Cailloux, M. 90, 344
 Caimmi, R. 80, 234; 125, 338
 Calafat, R. 110, 23
 Calamai, G. 109, 123; 112, 395 (49, 677); 126, 220 (53, 311)
 Caldara, A. 126, 377
 Caldeira, J.F.C. 75, 260 (36, 407); 85, 266 (40, 251); 91, 262 (42, 81); 103, 210 (46, 131); 104, 169 (46, 171); 106, 180 (46, 371); 107, 413 (47, 463); 127, 424 (54, 47)
 Caldwell, J.A.R. 71, 255
 Caloi, V. 75, 247; 103, L11; 103, 386; 107, 145; 121, 198
 Cameron, L.M. 117, 347
 Campbell, B. 123, 89
 Campolongo, F. 85, L4
 Canal, R. 110, 23; 117, L1; 124, 39
 Canavaggia, R. 83, 105
 Candellero, B. 78, 249 (38, 171)
 Cannon, R.D. 81, 379
 Canterna, R. 101, 418 (45, 53)
 Cantó, J. 76, 318; 84, 167; 85, 128; 86, 327
 Canton, G. 72, 241
 Canuto, V.M. 92, 26
 Cao, Ch. 106, 287
 Capaccioli, M. 73, 366 (36, 129); 83, 354; 111, 210 (49, 73); 115, 388
 Capelato, H.V. 78, 252 (38, 295); 87, 132; 96, 235; 117, 17
 Caplan, J. 78, 335; 124, 236
 Caputo, F. 82, 79; 82, 305; 111, 312; 123, 135; 123, 141; 128, 190
 Capuzzo-Dolcetta, R. 96, 254; 98, 344; 102, 250; 103, 424; 118, 332; 121, 183
 Caranicolas, N. 114, 360

- Caraveo, P.A. 75, 340; 81, 218; 90, 163; 91, L3; 93, 71; 105, 164; 107, 390; 115, 404; 128, 245
- Cardini, D. 127, 169
- Cardona, O. 118, 189
- Carignan, C. 75, 291
- Carlson, M. 87, 254 (41, 117)
- Carlson, T.A. 83, 238
- Carlsson, I.-M. 119, 166 (51, 341)
- Carlsson, M. 99, 202 (44, 15); 101, 417 (45, 1); 124, 155 (53, 157)
- Carnevali, P. 86, 212; 107, 172; 126, 403
- Carozzi-Meyssonier, N. 76, 369 (37, 529); 92, 189; 106, 379 (47, 237)
- Carpenter, G.F. 100, 189
- Carquillat, J.-M. 71, 273 (35, 203); 74, 113; 81, 333; 107, 215; 115, 23; 121, 331 (52, 293); 127, 425 (54, 187)
- Carr, B.J. 89, 6
- Carral, P. 95, 388
- Carrasco, G. 121, 330 (52, 279)
- Carrasco, L. 86, 217; 92, 253; 100, 183; 106, 89; 107, 412 (47, 419)
- Carsenty, U. 106, 307; 113, 142; 116, 54
- Carta, F. 99, 204 (44, 97); 104, 169 (46, 179); 112, 179 (49, 509); 114, 388; 124, 152 (53, 43)
- Carter, B. 121, 97
- Carter, B.S. 93, 219
- Cartier, F. 83, 199
- Carusi, A. 94, 226; 99, 262; 115, 327; 116, 201; 127, 373
- Casertano, S.P.R. 81, 371; 106, 274
- Cash, W. 72, L6; 80, 67; 91, L7
- Casini, C. 73, 216; 76, 370 (37, 559); 89, 345
- Casoli, F. 110, 287
- Cassatella, A. 71, L9; 74, L18; 79, 223; 88, 15; 90, 290; 100, 334 (44, 451); 103, 386; 107, 205; 111, 120; 112, 341; 119, 285; 123, L8; 127, 49; 128, 299
- Cassé, M. 76, 346
- Cassinelli, J.P. 78, 251 (38, 279)
- Castellani, V. 82, 79; 82, 305; 96, 207; 101, 1; 102, 411; 103, 386; 107, 145; 111, 312; 121, 198; 123, 141; 128, 64
- Castelli, F. 79, 174; 91, 32; 115, 217 (50, 233)
- Castley, J.C. 89, 252 (41, 397)
- Caswell, J.L. 77, 117
- Catala, C. 125, 313
- Catalano, F.A. 81, 389 (39, 127)
- Catalano, S. 73, 370 (36, 297); 80, 317; 91, 381 (42, 245); 100, 326; 106, 311; 115, 280; 117, 149; 121, 190
- Catanesi, M.G. 127, 169
- Cates, R.D. 114, 275
- Catura, R.C. 122, 124
- Caulet, A. 110, 185
- Cavaliere, A. 75, 322; 79, 169; 85, L9; 97, 269; 100, 194; 114, L1
- Cavallini, F. 85, 255; 109, 233
- Cavallo, G. 75, 240; 86, 36; 88, 367; 93, 171; 101, 159; 111, 368; 122, 119
- Cayatte, V. 102, L17
- Cayrel, R. 123, 89; 123, 135
- Cayrel de Strobel, G. 89, 253 (41, 405); 94, 1; 101, 419 (45, 97); 119, 1; 123, 89; 123, 135
- Cazenave, A. 112, 157
- Cazes, S. 87, L12; 100, 205; 104, 10
- Celis, L.S. 74, 146; 89, 145; 99, 58
- Celnik, W. 76, 24; 126, 152
- Celnik, W.E. 126, 222 (53, 403)
- Celnikier, L.M. 126, 293
- Ceppatelli, G. 79, 184; 85, 255; 107, 333; 109, 233
- Cernicharo, J. 104, 101; 128, 355
- Cerruti-Sola, M. 84, 269 (40, 85); 91, 381 (42, 245); 101, 273; 108, 314; 117, 149
- Cesarsky, C.J. 118, 223; 125, 249
- Cesarsky, D.A. 80, L1; 82, 203; 112, 49; 113, L7
- Cester, B. 73, 31; 73, 369 (36, 273); 76, 369 (37, 513); 79, 354; 81, 388 (39, 73); 82, 394 (39, 235); 82, 395 (39, 265); 82, 395 (39, 273)
- Chabod, D. 115, 216 (50, 147)
- Chaisson, E.J. 95, 388
- Chakravarti, S.P. 121, 1
- Chalabaev, A. 127, 279
- Chamaraux, P. 83, 38; 97, 223; 119, 165 (51, 331)
- Chambe, G. 80, 123; 113, 31; 119, 233
- Chambliss, C.R. 91, 381 (42, 245); 118, 209 (51, 111)
- Chambon, G. 79, L24; 109, L9
- Chan, K.L. 75, 133
- Chance, E.M. 74, 247
- Chanot, A. 121, 19
- Chapman, R.D. 126, L5
- Chapront, J. 91, 233; 103, 103; 103, 295; 124, 50; 128, 124
- Chapront-Touze, M. 83, 86; 86, 221; 91, 233; 103, 295; 116, 75; 119, 256; 124, 50
- Chareton, M. 88, 284 (41, 255); 102, 281 (45, 459)
- Charland, Y. 103, 244
- Charles, P. 72, L6
- Charugin, V.M. 79, 306
- Chau, W.Y. 75, 133
- Chaudhuri, B.B. 123, 253
- Chavarria, C.K. 75, 262 (36, 465); 79, L18; 90, 184; 93, 412; 101, 105; 118, 189
- Chaves, O.L. 88, 282 (41, 187)
- Che, A. 86, L7; 92, 204; 100, 164; 118, 107; 126, 225; 127, 227
- Chekir, S. 100, L14
- Chelli, A. 79, L5; 79, 315; 117, 199; 120, 237
- Chen, P.C. 74, 118
- Cheng, C.C. 86, 377
- Chernin, A.D. 89, 1
- Chevalier, C. 71, L17; 75, 258; 81, 368; 90, 113; 93, L3; 94, L3; 99, 274; 100, L1; 102, 31; 103, 428; 106, 339; 109, L1; 110, 316; 111, L9; 112, 68; 114, L7; 119, 171
- Chevillot, A. 113, L1
- Chevreton, M. 103, L17; 105, 1; 121, L23
- Chian, A.C.-L. 112, 391
- Chiappetta, P. 83, 348
- Chi-Chao Wu 78, 251 (38, 279)
- Chieffi, A. 126, 372
- Chièze, J.P. 82, 234; 91, 49; 91, 290; 95, 194; 98, 119
- Chincari, G. 96, 106; 104, 24; 109, 238
- Chincari, G.L. 121, 5
- Chini, R. 83, 384 (39, 411); 91, 186; 99, 346; 102, 171; 102, 281 (45, 451); 110, 332; 117, 289
- Chiosi, C. 74, 62; 75, 261 (36, 429); 79, 261; 80, 234; 80, 252; 83, 206; 93, 163; 98, 336; 102, 25; 105, 140; 110, 54; 123, 121
- Chitre, S.M. 121, L1
- Chiuderi, C. 96, 369; 97, 27; 105, L1; 105, 133
- Chiumiento, G. 121, 142
- Chlistovsky, F. 72, 379 (35, 345); 91, 379 (42, 177); 99, 204 (44, 97); 104, 169 (46, 179); 112, 179 (49, 509); 114, 388; 124, 152 (53, 43)
- Chmielewski, Y. 93, 334
- Chollet, F. 76, 368 (37, 477); 99, 401 (44, 189); 104, 170 (46, 249); 110, 181 (48, 371); 115, 217 (50, 195); 126, 161
- Chongming, X. 120, 15
- Christensen-Dalsgaard, J. 73, 121; 79, 260; 79, 260; 79, 269; 104, 173
- Christiansen, J.J. 109, 141
- Chu, Y.-Q. 106, 287
- Chung, K.C. 93, 309
- Chung-Chieh Cheng 97, 210
- Churayev, R.S. 113, 179
- Churchwell, E. 72, 215; 75, 268; 77, 316; 95, 143; 96, 278
- Ciatti, F. 72, 287; 79, 247; 85, 14; 88, 282 (41, 143); 94, 251; 95, 177; 100, 59; 100, 330; 116, 35; 116, 43; 119, 153; 122, 343; 123, 360 (52, 443); 124, 154 (53, 109)
- Ciufolini, I. 97, L12
- Clairemidi, J. 115, 216 (50, 147)
- Clarià, J.J. 106, 380 (47, 323); 114, 419 (50, 13)
- Clark, B.G. 89, 377
- Clark, J.P.A. 72, 120
- Clark, T.A. 86, 364; 100, 254
- Clarke, D. 126, 260
- Clarke, J.N. 75, 7; 75, 19; 81, 235
- Claudius, M. 87, 339; 100, 186

- Clausen, J.V. 73, 365 (36, 45); 83, 339; 95, 210 (43, 141); 101, 7; 112, 180 (49, 571); 121, 271; 121, 332 (52, 323); 127, 425 (54, 149); 127, 425 (54, 161); 128, 17; 128, 261 (54, 301)
- Clauzet, L.B.F. 75, 260 (36, 401); 99, 401 (44, 189); 123, 359 (52, 403)
- Clavel, J. 73, 174; 74, L18; 79, 223
- Claverie, A. 91, L9
- Clay, R.W. 100, 254
- Cleary, M.N. 73, 366 (36, 95); 100, 209
- Clements, G.L. 75, 193
- Cloutman, L.D. 74, L1
- Clube, S.V.M. 89, 225; 122, 255
- Code, A.D. 106, 381 (47, 341)
- Coe, M.J. 100, 189
- Coffey, S. 81, 310
- Cogan, B.C. 86, 283
- Cohen, N.L. 71, 362; 89, L6; 95, 386; 96, 230; 100, L10
- Coles, W.A. 123, 207
- Colin, J. 76, 356; 97, 33; 97, 33; 97, 63; 115, 216 (50, 147)
- Coll, R.F. 71, L22
- Collins, M.S. 74, 108
- Collin-Souffrin, S. 72, 293; 76, 257 (37, 361); 78, 200; 83, 190; 93, 362; 103, 69; 104, 264; 106, 362
- Colomb, F.R. 82, 244; 84, 268 (40, 47); 87, 253 (41, 67); 112, 141
- Combes, F. 78, L1; 84, 85; 85, 244; 88, L1; 90, 88; 93, L1; 96, 164; 110, 287
- Combes, M. 84, 148; 113, L1; 121, L4
- Comte, G. 72, 73; 100, 334 (44, 441); 114, 7
- Conconi, P. 76, 368 (37, 487); 85, 265 (40, 135); 100, 201; 104, 170 (46, 185); 118, 209 (51, 97)
- Condal, A.R. 112, 124
- Connes, P. 71, L1; 76, L11
- Connor, J.W. 107, L1
- Considère, S. 111, 28; 115, 216 (50, 147)
- Contadakis, M.E. 101, 241
- Conti, P.S. 88, 230; 92, 242
- Contini, M. 88, 117; 92, 273; 127, 15
- Contopoulos, G. 71, 221; 81, 198; 90, 198; 92, 33; 102, 265; 104, 116; 117, 89
- Contreras, K. 73, 370 (36, 307); 91, 380 (42, 193)
- Conway, R.G. 105, 278
- Cook, J.W. 92, L7; 97, 394; 124, 181
- Cooke, D.J. 100, 209
- Cooper, J. 71, 283; 127, 224
- Copley, J. 83, 238
- Coppola, M. 102, 20
- Coradini, A. 95, 138; 98, 173; 99, 255
- Corbin, T. 104, 88
- Cordes, J.M. 94, L6; 103, 370
- Cordoni, J.-P. 100, 307; 106, 179 (46, 347); 118, 210 (51, 135); 123, 358 (52, 383)
- Cormier, P. 95, 395 (43, 247)
- Cornide, M. 82, 221; 82, 395 (39, 251)
- Cornwell, T.J. 119, L3; 121, 281
- Coron, N. 77, 155; 81, 152; 94, 265
- Corsi, C.E. 101, 1; 107, 412 (47, 451); 113, 39; 118, 209 (51, 83); 124, 151 (53, 1); 126, 278; 128, 94
- Cosmovici, C.B. 72, 241; 88, L16; 98, 408; 101, 397; 103, 382; 114, 373
- Costa, E. 93, 245; 119, 324 (51, 425); 121, 330 (52, 279)
- Costa, J.E.R. 119, 131
- Costa, V. 73, 365 (36, 61)
- Costain, C.H. 90, 283; 111, 299
- Costero, R. 92, 253; 100, 183
- Cot, C. 97, 265
- Cotton, W.D. 86, 364
- Counselman, C.C. 86, 364
- Coupiac, P. 72, 45
- Coupry, M.F. 92, 132
- Courtès, G. 97, 334; 108, 134; 116, 312
- Courtin, R. 77, 155
- Couteau, P. 71, 273 (35, 197); 73, 364 (36, 11); 95, 209 (43, 79); 99, 403 (44, 305); 102, 313; 105, 323; 110, 182 (48, 443); 114, 420 (50, 49); 126, 223 (53, 441)
- Couturier, P. 74, 9
- Cowley, C.R. 87, 369
- Cox, J.P. 85, 263
- Cox, P. 117, 265
- Craig, I.J.D. 79, 121
- Cram, L.E. 71, 14; 108, 251
- Cram, T.R. 85, 266 (40, 215)
- Cramer, N. 78, 305; 87, 254 (41, 111); 88, 135; 97, 416 (43, 395); 112, 330; 117, 248; 128, 262 (54, 371)
- Crane, P.C. 86, 267 (40, 295); 96, 393
- Crawford, R. 75, 260 (36, 371)
- Crézé, M. 85, 311; 107, 101; 115, 216 (50, 147)
- Crifo-Magnant, F. 88, 97; 97, 417 (43, 455)
- Cristaldi, S. 78, 249 (38, 175); 89, 123
- Cristiani, S. 105, 369; 114, 216; 119, 153
- Crivellari, L. 72, 256; 73, 365 (36, 73); 89, 251 (41, 299); 106, 332; 106, 380 (47, 295); 107, 75; 114, 170; 121, 164 (52, 135)
- Crovisier, J. 88, 283 (41, 229); 88, 329; 94, 162; 97, 195; 98, 271; 99, 320; 101, 401; 122, 282; 123, 61; 126, 170
- Crowe, R.A. 108, 55
- Crutcher, R.M. 125, L23
- Cruvellier, P. 74, 218; 88, 323; 116, 312; 128, 114
- Cruz-González, C. 92, 253
- Cucchiario, A. 71, 270 (35, 75); 85, 266 (40, 207); 89, 380; 114, 102
- Cugier, H. 128, 429
- Cugnon, P. 120, 156
- Culhane, J.L. 122, 124
- Cunningham, C.T. 116, 130
- Curchod, A. 80, 331 (38, 449); 89, 253 (41, 405); 92, 289
- Curir, A. 73, 370 (36, 309)
- Custodi, P. 118, 365
- Cuypers, J. 89, 207; 102, 282 (45, 487); 127, 186
- Czarny, J. 71, 38
- Dačić, M. 123, 360 (52, 455)
- Dachs, J. 97, 417 (43, 427); 107, 240; 115, 218 (50, 261)
- da Costa, J.M. 94, 214
- Daguillon, J. 111, 151
- Daigne, G. 94, L9; 96, 296
- Dalgarno, A. 71, 366; 85, 144; 89, 379; 91, 68
- Daltabuit, E. 111, 43
- Dames, H.A.C. 72, 148
- D'Amico, N. 90, 163
- Damle, S.V. 108, 249
- Danaher, S. 104, L4
- Danese, L. 75, 322; 79, 169; 82, 322; 84, 364; 85, L9; 87, 303; 94, L33; 97, 269; 107, 39; 121, 114
- Danezis, E. 111, 209 (49, 1)
- Daniel, J.Y. 86, 198; 87, 204; 94, 121; 111, 58; 114, 341; 121, 51
- Danks, A.C. 73, 247; 98, 223; 102, 225; 106, 4; 106, 105; 118, 301; 124, 188
- D'Anna, E. 72, 241
- D'Antona, F. 74, 161; 113, 303; 114, 289; 115, L1; 120, 164; 122, 339; 126, 372; 127, 149
- Danziger, I.J. 111, 171
- Däppen, W. 91, 212; 124, 11
- Daras-Papamargaritis, H. 120, 181; 125, 280
- Darchy, B. 72, 39
- Davelaar, J. 87, 276; 92, 231; 97, 413
- Davidson, J.P. 111, 362
- Davies, J.K. 123, 301
- d'Àvila, V.A. 110, 183 (48, 485); 123, 358 (52, 373)
- Davis Philip, A.G. 72, 379 (35, 347); 85, 266 (40, 199); 95, 393 (43, 191)
- Davoust, E. 112, 305; 112, 394 (49, 631); 125, 101
- Dawe, J.A. 89, 225; 122, 255
- De, U.K. 121, 1
- de Almeida, A.A. 84, 177; 95, 383; 113, 199
- Dean, A.J. 117, 38; 122, 83; 125, 52
- Débarbat, S. 73, 364 (36, 9); 75, 260 (36, 399); 76, 368 (37, 475); 76, 368 (37, 477); 77, 370; 96, 193; 99, 401 (44, 189); 102, 371; 104, 170 (46, 249); 115, 217 (50, 195)
- Debehogne, H. 71, 55; 73, 370 (36, 313); 75, 260 (36, 407); 76, 368 (37, 467); 78, 251 (38, 275); 82, 393 (39, 163); 85, 266 (40, 249); 85, 266 (40, 251); 85, 266 (40, 253); 85, 267 (40, 257); 86, 269 (40, 363); 86, 269 (40,

- 371); 86, 269 (40, 375); 87, 254 (41, 109); 88, 282 (41, 187); 91, 262 (42, 81); 91, 263 (42, 85); 101, 418 (45, 79); 102, 279 (45, 183); 103, 210 (46, 131); 104, 169 (46, 171); 106, 180 (46, 371); 107, 413 (47, 463); 108, 197; 110, 182 (48, 449); 112, 396 (49, 775); 114, 420 (50, 23); 114, 420 (50, 73); 115, 218 (50, 277); 118, 208 (51, 37); 127, 424 (54, 47); 128, 262 (54, 365)
- de Bergh, C. 83, 149; 94, 382
de Biase, G.A. 76, 242
de Boer, J.A. 82, 207
de Boer, K.S. 71, 141; 75, L11; 115, 128; 115, 218 (50, 247); 125, 258
de Bruyn, A.G. 73, 196; 73, 368 (36, 213); 94, L25; 119, 301; 128, 318
de Castro, E. 99, 141; 102, 207; 113, 94; 119, 243
Decaudin, M. 111, 125
de Cheveigne, S. 79, 256
Decker, M.T. 95, 304
De Concini, C. 87, 1
Deerenberg, A.J.M. 92, 231; 97, 413
Defourneau, D. 79, 256; 117, 164
de Freitas Mourão, R.R. 71, 55; 85, 266 (40, 249); 85, 266 (40, 253); 86, 269 (40, 363); 86, 269 (40, 375); 88, 282 (41, 187); 101, 418 (45, 79)
de Freitas Pacheco, J.A. 108, 111
de Genouillac, G.V. 94, 219; 99, L18; 101, 276
Degewij, J. 110, 183 (48, 481)
de Graauw, T. 81, 223; 101, L1; 102, 257
De Grève, J.P. 73, 19; 77, 295; 82, 73; 83, 252; 120, 97
de Grijp, M.H.K. 127, 235
de Groot, M.J.H. 99, 351; 103, 427; 120, 287; 123, L8; 128, 299
Deguchi, S. 117, 314
Deharveng, J.M. 74, 218; 88, 52; 88, 323; 97, L7; 103, 305; 106, 16; 109, 179; 128, 114
Deharveng, L. 71, 151; 110, 185; 117, 265; 124, 1
de Jager, C. 79, L28; 90, 170; 95, 215; 107, 320; 109, 289; 126, 115
de Jager, G. 92, 156
de Jong, T. 91, 68; 98, 140; 98, 145; 100, 124; 115, 213
de Jonge, A.R.W. 112, 178 (49, 427)
Dekel, A. 74, 186; 85, 154; 101, 79
Dekker, E. 75, 259 (36, 323)
Delache, P. 104, 264
de Landtsheer, A.C. 121, 329 (52, 213); 124, 155 (53, 161); 127, 297
de la Noë, J. 86, 342; 86, 349; 99, 401 (44, 165); 103, 210 (46, 135); 104, 101; 113, 118; 124, 1
de Lara, E. 118, 189
Delbouille, L. 108, 201
Delgado, A.J. 87, 343; 96, 142; 122, 193; 126, 45; 127, L15
Delgado, L. 122, 219
Delgrosso, A. 83, 385 (39, 423)
Dell'Atti, F. 118, 365
Della Ventura, A. 117, 38
Delmas, C. 111, 211 (49, 107)
Delmas, F. 103, 210 (46, 151)
de Loore, C. 73, 19; 76, 245; 78, 287; 82, 73; 83, 252; 85, 119; 87, 68; 90, 204; 93, 219; 95, 202; 101, 161; 104, 150; 106, 137; 111, 229; 115, 69; 121, 286
del Rio, G. 91, 380 (42, 189)
del Romero, A. 104, 83; 123, L5
Delsemme, A.H. 73, L7
Delva, M. 77, 252; 84, 383
Delvaille, J.P. 90, 283
Demarque, P. 92, 163; 118, 262
de Mottoni y Palacios, G. 116, 323
de Muizon, M. 83, 22; 83, 140
Denardo, G. 123, 355
den Boggende, A.J.F. 80, 1; 81, 185
Dengel, J. 85, 356
Dennefeld, M. 74, 123; 83, 275; 85, L7; 92, 22; 103, 44; 111, 171; 112, 215; 113, L10; 118, 234; 118, 301; 120, 249; 124, 143; 124, 172; 127, 42
de Pater, I. 72, 148; 88, 175; 91, 41; 93, 370
Deprit, A. 81, 310
Dere, K.P. 124, 181
Derendinger, J.P. 94, L19
Deridder, G. 75, 83; 77, 286; 103, 210 (46, 151)
Derman, E. 123, 17
de Rooij, W.A. 126, 283
de Ruiter, H. 95, 7
De Ruiter, H.R. 77, 86; 105, 254
Desai, U. 126, 400
de Sanctis, G. 73, 370 (36, 309); 84, 269 (40, 119); 87, 253 (41, 29); 88, 282 (41, 183); 99, 203 (44, 43); 101, 419 (45, 93); 107, 412 (47, 447); 108, 197; 110, 182 (48, 449); 114, 421 (50, 421); 118, 208 (51, 37); 119, 324 (51, 385)
Desch, M.D. 86, 339; 91, 378
Deschamps, M. 123, 225
de Sisteró, M.E.C. 78, 249 (38, 171)
Desolneux, N. 122, 137
Despiau, R. 93, 53; 95, 394 (43, 231); 108, 296
Despois, D. 97, 195; 99, 320; 104, 101
Destombes, J.L. 81, 1
Deubner, F.-L. 72, 177; 75, 223; 77, 347; 97, 114; 111, L1; 114, 85; 121, 291; 126, 216
Deul, E.R. 118, 289
de Vaucouleurs, A. 111, 212 (49, 109)
de Vaucouleurs, G. 79, 274; 111, 212 (49, 109); 117, 171 (50, 283); 118, 4
de Vejt, C. 104, 88; 109, L15; 109, 282; 113, 213; 114, 147
de Vejt, Chr. 79, L16; 101, 191
de Vries, J.S. 86, 248; 93, 403
Dewdney, P.E. 111, 299
De Zotti, G. 79, 169; 82, 322; 84, 364; 85, L9; 87, 303; 94, L33; 97, 269; 107, 39; 121, 114
d'Hendecourt, L.B. 109, L12
Diamond, P.J. 124, L4
Diaz Alonso, J. 125, 287
Dickel, H.R. 84, L1; 120, 74; 125, 320
Dickel, J.R. 75, 44; 79, 243; 85, 55
Dickens, R.J. 75, L11; 117, 257
Dickey, J.M. 98, 271; 101, 332; 103, 370; 112, 120; 122, 282
Dickinson, A.S. 100, 302; 107, 26
Dickman, R. 85, 244
Di Cocco, G. 117, 38
Didelon, P. 115, 217 (50, 199); 124, 154 (53, 119)
Dieckvoss, C. 121, 69
Diehl, R. 110, 138
Diethelm, R. 106, 380 (47, 335); 124, 108
Di Fazio, A. 72, 204
di Gregorio, R. 123, 141
Di Martino, M. 123, 326
Dimitrijević, M.S. 102, 93; 112, 251; 123, 249; 127, 68
Dipaolantonio, A. 111, 212 (49, 129); 117, 1
di Serego, S. 76, 370 (37, 559)
di Tullio, G.A. 76, 370 (37, 591); 82, 322
Divan, L. 78, 287; 126, L8; 126, 192; 126, 205
Dixit, V.V. 89, 259
Djurović, D. 100, 156; 118, 26
Doan, N.H. 90, 8
Doazan, V. 73, 285; 78, 287; 115, 138; 117, 172 (50, 481); 128, 171
Dobrowolny, M. 83, 26; 92, 246; 121, 203
Docherty, I.S. 84, 75
Dodd, R.J. 84, 269 (40, 81)
D'Odorico, S. 76, 240; 83, L8; 84, 269 (40, 67); 92, 22; 105, 410; 108, 339; 115, 315; 124, 154 (53, 97)
Dokuchaev, V.I. 111, 1; 111, 16
Dolez, N. 102, 375; 103, L17; 121, L23; 127, 25
Dolginov, A.Z. 79, 60
Dollfus, A. 75, 204; 116, 323; 123, 225
Dominguez-Tenreiro, R. 93, 306; 117, 17
Dommanget, J. 94, 45
Donas, J. 90, 8; 97, L7; 106, 16; 119, 185
Donati Falchi, A. 89, 363
Donn, B.D. 73, L7
Dönszelmann, A. 121, 327
Doo Jong Song 103, L7
Doom, C. 87, 77; 103, 210 (46, 151); 116, 303; 116, 308; 120, 97

- Dopita, M.A. 76, 240; 84, 269 (40, 67); 92, 22; 115, 315
 Dorfi, E. 114, 151
 Dorren, J.D. 122, 17
 Doschek, G.A. 73, 74; 73, 361; 76, 359; 78, 342; 79, 357; 80, 22; 86, 32; 86, 377; 97, 210
 Dostal, V.A. 91, 302
 Dottori, H.A. 76, 369 (37, 519); 102, 245
 Dourneau, G. 111, 151; 112, 73
 Downes, A.J.B. 92, 47; 95, 177; 97, L1; 97, 296; 98, 205; 100, 330; 103, 277
 Downes, D. 71, 270 (35, 1); 71, 270 (35, 23); 71, 275; 72, 234; 73, L13; 73, 253; 78, 239; 79, 233; 84, L1; 86, 269 (40, 379); 87, 6; 91, 379 (42, 163); 94, 80; 99, 27; 112, 394 (49, 607); 117, 343; 126, 10
 Dowthwaite, J.C. 126, 1
 Doyle, J.G. 78, 318; 87, 183; 90, 97
 Doyle Evans, W. 100, L1; 103, 428
 Drake, F.D. 89, L6
 Drapatz, S. 75, 26; 128, 207
 Dravins, D. 73, L4; 90, 151; 96, 64; 96, 345; 98, 367
 Drechsel, H. 83, 363; 88, L9; 94, 285; 98, 27; 99, 166; 102, 282 (45, 473); 104, 256; 106, 70; 110, 246; 110, 281; 125, L1; 126, 357
 Drew, J. 106, 153
 Drilling, J.S. 71, 214; 102, 281 (45, 439); 113, L22
 Drummond, J.D. 88, L11
 Dryzhakova, O.V. 98, 57
 Dubner, G.M. 82, 244; 112, 41
 Dubois, P. 79, 143; 110, 182 (48, 375)
 Dubout-Crillon, R. 104, 15
 Ducatel, D. 72, 313; 97, 415 (43, 359); 118, 294; 122, 193
 Ducati, J.R. 74, 280; 100, 331 (44, 337); 101, 420 (45, 119)
 Dudognon, G. 111, 211 (49, 105); 126, 221 (53, 361)
 Duerbeck, H.W. 73, 369 (36, 283); 75, 297; 78, 249 (38, 155); 81, 157; 102, 337
 Duflot, A. 103, 207 (49, 13)
 Duflot, M. 83, 383 (39, 311); 101, 226; 103, 207 (49, 13); 108, 415 (48, 1); 110, 182 (48, 409)
 Duflot, R. 78, L5
 Duflot-Augarde, R. 112, 257
 Dufton, P.L. 73, 203; 78, 318; 81, 8; 84, 115; 95, 24; 97, 10
 Duijveman, A. 91, 17
 Duinen, R.J. van 74, L15; 75, L1
 Dulk, G.A. 88, 203; 88, 218; 116, 217; 124, 103
 Dulou 95, 211 (43, 146)
 Dultzin-Hacyan, D. 103, 69; 111, 43; 128, 148
 Dumont, A.M. 102, 1
 Dumont, R. 84, 277
 Dumont, S. 72, 293; 83, 190; 89, L8; 104, 264; 106, 362; 123, 89
 Dupouy 95, 211 (43, 146)
 Duquennoy, A. 114, 7
 Durdin, J.M. 113, 211
 Durić, N. 83, 238
 Durney, B.R. 108, 322
 Durouchoux, P. 94, 214; 120, 150
 Durrant, A.C. 97, 10
 Durrant, C.J. 73, 137; 76, 208; 89, 80; 91, 251; 95, 221; 97, 10; 104, 207; 104, 211; 111, 272; 114, 85; 116, 332; 123, 319
 Durret, F. 106, 67; 127, 322
 Dürst, J. 112, 241
 Düschl, W.J. 119, 248; 121, 153
 Duval, M.F. 98, 352; 121, 297
 Duvignau, H. 71, 310
 Dvorak, R. 77, 252; 77, 320; 84, 383; 108, 14
 Dworetsky, M.M. 84, 350; 85, 138
 Dyck, H.M. 109, 320; 125, 29
 Dyson, J.E. 73, 132; 76, 318; 124, 77
 Dzhalilov, N.S. 112, 16
 Dziembowski, W. 97, 16
 Eaton, J.A. 117, 149
 Eckart, A. 108, 157
 Edelman, C. 77, 320; 111, 220
 Edmunds, M.G. 101, 377
 Edwards, D.A. 123, 316
 Egge, K.E. 118, 75
 Egret, D. 85, 266 (40, 199); 95, 395 (43, 259); 106, 115; 123, 39
 Ehlers, J. 96, 293
 Eichendorf, W. 77, 227; 93, L5; 97, 417 (43, 427); 107, 276; 109, 274
 Eichhorn, H. 102, 35
 Eidelsberg, M. 97, 417 (43, 455)
 Einaudi, G. 97, 27; 97, 232; 105, L1
 Einicke, O.H. 125, 176 (53, 223)
 Eiroa, C. 74, 89; 92, L9; 95, 206; 99, 203 (44, 77); 108, 274; 128, 262 (54, 309)
 Ekers, R.D. 73, L1; 82, 394 (39, 215); 94, 61; 101, 194; 110, 100; 110, 169; 119, L3; 120, 297; 122, 143; 122, 267; 122, 305; 127, 205; 127, 361
 Ekman, A. 95, 266
 Ekman, A.B.G. 71, 270 (35, 55)
 Elander, N. 83, 238
 El Eid, M. 93, 395
 El Eid, M.F. 91, 381 (42, 215); 119, 54; 119, 61
 Elgarøy, Ø. 82, 308; 99, 401 (44, 165); 104, 99
 Elgered, G. 96, 316
 Elitzur, M. 73, 322; 81, 351; 81, 354
 Elldér, J. 97, 192; 113, L18
 Elliott, K.H. 77, 371 (38, 39); 84, 167
 Ellison, D.C. 128, 102
 Elmegreen, B. 75, 137
 Elmegreen, B.G. 80, 77
 Elmore, D.F. 72, 45; 84, 60
 Elsässer, H. 74, 89; 91, 186; 108, 274
 Elst, E.W. 125, 175 (53, 215)
 Elsworth, Y.P. 103, 131
 Elwert, G. 86, 181; 86, 188; 101, 150
 Elzner, L.R. 86, 181; 86, 188
 Emanuele, A. 127, 169
 Emerich, C. 87, L12; 100, 205; 104, 10
 Emerson, D.T. 76, 92; 76, 120; 77, 25; 94, 29; 95, 177; 98, 260; 100, 330
 Encrenaz, P.J. 78, L1; 88, L1
 Encrenaz, Th. 84, 148; 126, 170
 Endler, F. 73, 190; 120, 141; 121, 291
 Engberg, M. 128, 260 (54, 203)
 Enge, W. 75, 114
 Engel, A.R. 87, 252 (41, 13)
 Engelmann, J.J. 102, L9
 Engels, D. 75, 259 (36, 337); 101, 417 (45, 5); 124, 123
 Engin, S. 113, 250
 Engvold, O. 85, 326; 91, 380 (42, 209)
 Epchtein, N. 72, L4; 85, L1; 97, 1; 99, 210; 107, 229; 111, 91; 120, 53; 127, 425 (54, 167)
 Epstein, R.I. 74, 353
 Erculiani Abati, L. 93, 282; 110, 180 (48, 333)
 Ergma, E.V. 84, 123
 Eriksson, K. 71, 178
 Erman, P. 83, 238
 Erskine, F.T. 83, 256
 Escande, D.F. 94, 219; 99, L18; 101, 276
 Estalella, R. 124, 309
 Estulin, I.V. 79, L24; 100, L1; 100, L1; 103, 428; 126, 400
 European Science Foundation 115, 216 (50, 187)
 Evans, A. 73, 113; 78, 78; 89, 158
 Evans, A.J. 87, 252 (41, 13)
 Evans, D.S. 123, 184
 Evans, K.D. 87, 213; 97, 218
 Fabbiano, G. 122, 330
 Fabbri, R. 74, L20; 78, 376; 114, 219; 122, 151; 128, 438
 Fabian, A.C. 87, 102; 111, L9
 Fabri, E. 82, 123
 Fabricius, C. 89, 57; 105, 413; 125, 176 (53, 223)
 Fahr, H.J. 77, 101; 87, 20; 102, 359; 118, 57; 122, 181
 Fahrbach, U. 74, 133
 Falciani, R. 107, 414 (47, 485)
 Falgarone, E. 90, 88; 95, 32
 Falik, D. 71, 332
 Falipou, M.A. 86, 245
 Falomo, R. 127, L17
 Fang, C. 118, 139
 Fang, Ch. 107, 412 (47, 441); 111, 209 (49, 61)
 Fang, L.-Z. 106, 287

- Fanti, C. 95, 208 (43, 1); 97, 251; 101, 418 (45, 61); 105, 200; 114, 400; 118, 171; 119, 163 (51, 179); 123, 359 (52, 411); 126, 412
- Fanti, R. 71, 272 (35, 169); 73, 40; 75, 259 (36, 359); 85, 101; 94, 61; 101, 194; 101, 418 (45, 61); 105, 200; 110, 169; 118, 171; 119, 163 (51, 179); 120, 297; 122, 305; 123, 359 (52, 411); 126, 412; 128, 165
- Faraggiana, R. 76, L18; 78, 250 (38, 227); 79, 174; 79, 230; 82, 48; 84, 366; 92, 13; 103, 145; 107, 416 (47, 595); 114, 170; 128, 375
- Farina, G. 127, 169
- Farinella, P. 104, 159; 117, 3
- Fasano, G. 83, 354
- Faucher, P. 81, 137; 118, 147
- Faucherre, M. 120, 263
- Faulkner, D.J. 86, 283
- Faúndez, A.A. 75, 262 (36, 477)
- Fawcett, B.C. 84, 78
- Fazio, G.G. 76, 86
- Feautrier, N. 127, 263
- Federici, L. 72, 380 (35, 391); 127, 29
- Federico, C. 98, 173; 99, 255
- Federman, S.R. 89, 113; 96, 198
- Fegan, D.J. 104, L4
- Fehrenbach, Ch. 83, 383 (39, 311); 93, 1; 95, 396 (43, 296); 101, 226; 103, 207 (49, 13); 104, 171 (46, 257); 108, 415 (48, 1); 108, 416 (48, 93); 110, 182 (48, 409); 112, 178 (49, 483)
- Feibelman, W.A. 99, 73; 109, 136; 122, 335
- Feissel, M. 99, 401 (44, 189)
- Feitzinger, J.V. 76, 370 (37, 575); 84, 50; 88, 41; 96, 181; 98, 371; 111, 255; 116, 117; 119, 42; 119, 326 (51, 505); 120, 269; 126, 352; 127, 113
- Feix, M. 78, 65; 94, 373
- Feldman, F.R. 76, L14
- Feldman, P.A. 99, 36; 101, L13; 127, 420
- Feldman, P.D. 103, 154; 107, 385
- Feldman, U. 73, 74; 73, 361; 76, 359; 78, 342; 79, 357; 80, 22; 86, 32; 86, 377; 97, 210
- Felenbok, P. 71, 38; 75, 176; 110, L11; 113, L1; 127, 74; 128, 74
- Felli, M. 76, 69; 89, 140; 89, 363; 94, 231; 100, 28; 100, 42; 102, 424; 107, 354; 109, 123; 117, 115
- Fenimore, E.E. 100, L1; 103, 428
- Fenkart, R.P. 71, 274 (35, 249); 72, 378 (35, 271); 91, 352; 112, 178 (49, 475); 119, 163 (51, 213); 119, 326 (51, 533)
- Feretti, L. 71, 272 (35, 169); 73, 40; 92, 296; 100, 323; 105, 200; 115, 423; 119, 163 (51, 179); 119, 165 (51, 321); 123, 359 (52, 411); 126, 311
- Ferguson, D.C. 84, 260; 94, L6
- Ferlet, R. 90, L13; 98, L1; 99, L5; 120, 58; 124, 172; 125, L5
- Fernandez, J.A. 81, 387 (39, 11); 96, 26
- Fernández, J.B. 88, 283 (41, 215)
- Fernandez-Figueroa, M.J. 76, 249; 82, 221; 82, 395 (39, 251); 99, 141; 102, 207; 113, 94; 119, 227; 119, 243
- Fernie, J.D. 87, 227
- Ferrari, A. 79, 190; 92, 246; 114, 394; 125, 179
- Ferrari-Toniolo, M. 92, 238; 111, L7; 112, 292; 127, 49
- Ferraro, I. 126, 278
- Ferrer, O.E. 84, 106; 84, 108
- Ferreri, W. 73, 370 (36, 309); 87, 253 (41, 29); 88, 282 (41, 183); 101, 419 (45, 93); 114, 421 (50, 421); 119, 324 (51, 385)
- Ferrin, I. 107, L7
- Fesen, R.A. 114, 414
- Festou, M.C. 95, 69; 96, 52; 103, 154
- Fiala, N. 124, L11
- Ficarra, A. 75, 259 (36, 359); 97, 251; 100, 323; 101, 418 (45, 61); 105, 200; 118, 171
- Fich, M. 76, 257 (37, 351)
- Fichtel, C.E. 109, 352
- Figer, A. 111, 151
- Fijalkow, E. 78, 65; 94, 373
- Finkenzeller, U. 112, 174; 118, 189; 124, 157; 126, 438
- Firmani, C. 92, 253; 107, 252; 119, 167
- Fischman, G.J. 79, 88
- Fisher, W.A. 121, 330 (52, 237)
- Fitton, B. 102, 257
- Fitze, H.R. 76, 354
- Fitzgerald, M.P. 76, 257 (37, 345); 76, 257 (37, 351); 78, 250 (38, 197); 88, 283 (41, 211); 111, 81; 112, 179 (49, 521)
- Fleck, E. 96, 158
- Fletcher, J.M. 121, 330 (52, 237)
- Fliche, H.H. 78, 87; 108, 256
- Floquet, M. 73, 367 (36, 167); 74, 250; 77, 263; 100, 3; 101, 176; 112, 299
- Flora, U. 73, 365 (36, 73)
- Florentin-Nielsen, R. 100, 186
- Florsch, A. 96, 158
- Flower, D.R. 72, L1; 72, 361; 73, 237; 83, 33; 93, 347; 110, 163; 114, 238; 119, 321
- Focardi, P. 113, 15
- Fofi, M. 124, 313
- Fogh Olsen, H.J. 89, 57; 111, 209 (49, 13)
- Foing, B. 111, 125
- Fomalont, E.B. 76, 106; 80, 201; 95, 250; 110, 169
- Fomin, V.A. 123, 360 (52, 455)
- Fontaine, G. 97, 416 (43, 367)
- Fontenla, J.M. 100, 79
- Forbes, T.G. 127, 153
- Formigini, L. 72, 380 (35, 391); 82, 393 (39, 129); 85, 80
- Forster, J.R. 84, L1; 114, 109; 115, 164; 118, 157; 120, 74
- Fort, B. 75, 176; 90, 344
- Forti, G. 126, 307
- Fossat, E. 77, 347; 77, 351; 94, 95
- Foti, G. 96, 267; 103, L5; 118, 341; 123, 93
- Fouquart, Y. 79, 287
- Fouqué, P. 122, 273; 126, 221 (53, 351)
- Fowler, L.A. 93, 54; 101, 356; 109, 279
- Foy, F.C. 84, 85
- Foy, R. 78, 25; 79, L5; 85, 287; 86, 157; 86, 295; 91, 380 (42, 185); 92, L1; 93, 315; 99, 221; 103, 135; 106, 235; 115, 253; 120, 237; 122, 261; 124, 331
- Fracassini, M. 99, 203 (44, 55); 99, 397; 101, 420 (45, 145); 107, 326
- Fracastoro, M.G. 78, 112; 84, 266; 121, 142
- Frahm, R. 72, 263
- Franceschini, A. 79, 169; 85, L9; 97, 269
- Franco, J. 86, 217
- Franco, M. 127, L3; 128, 171
- Franco, M.L. 84, 369; 121, 164 (52, 135); 122, 9
- Francou, G. 103, 223; 114, 125; 128, 124
- Frandsen, S. 72, 111; 100, 331 (44, 329)
- Frank, J. 93, 255
- Fransson, C. 87, 102; 111, 140
- Fraser, C.W. 84, 269 (40, 81)
- Frater, R.H. 84, 75
- Fredga, K. 73, L4; 89, 255; 100, 334 (44, 451)
- Freedman, I. 82, 110
- Freeman, J. 83, 58
- Freeth, R. 118, 325
- Freihoffer, D. 100, 178
- Freire, R. 78, 148
- Freire Ferrero, R. 121, 59
- Freitas Mourão, R.R. de 87, 254 (41, 109)
- Fresneau, A. 102, 143
- Freudenstein, S. 71, 283
- Frey, A. 74, 133
- Friberg, P. 83, 226; 109, 23
- Fricke, K.J. 75, 7; 75, 19; 79, 245; 81, 235; 93, 395; 100, L4; 100, 1; 102, L23; 104, 198; 117, 60; 119, 54; 119, 61; 119, 80; 122, 33; 125, 276; 126, 207
- Fricke, W. 75, 1; 107, L13
- Fridlund, C.V.M. 91, L1; 115, 308
- Fried, J.W. 81, 182; 88, 141; 118, 166
- Friedjung, M. 71, 310; 77, 357; 83, 261; 85, 233; 93, 320; 99, 226; 114, 351; 119, 285; 126, 407; 126, 427
- Fringant, A.-M. 81, 388 (39, 39); 85, 367

- Frisch, H. 83, 166; 87, 357; 91, 202; 104, 264; 114, 119; 126, 269
- Frisch, U. 105, 6
- Froeschlé, C. 72, 246; 82, 183; 93, 62; 111, 346
- Froeschlé, Ch. 91, 202
- Froeschlé, M. 87, 250; 116, 89; 121, 319
- Fuchs, B. 72, 263; 113, 85
- Fuhr, J.R. 90, 14
- Fujimoto, M. 91, 335; 104, 142
- Fujimura, F.S. 79, 299
- Fukui, Y. 122, 171
- Furniss, I. 82, 86; 90, 304
- Fürst, E. 72, 211; 92, 225; 93, 43; 107, 178; 115, 428
- Fusco-Femiano, R. 100, 194
- Fusi Pecci, F. 85, 269; 92, 325 (42, 357); 101, 1; 107, 412 (47, 451); 113, 39; 118, 209 (51, 83); 124, 151 (53, 1); 128, 94
- Fymat, A.L. 79, 287
- Gabriel, M. 82, 8; 85, 20; 92, 242; 94, 11; 99, 39; 101, 215; 110, 50; 113, 219; 119, 253; 123, 283
- Gadeyne, L. 95, 240
- Gahm, G.F. 73, 14; 82, 295; 83, 263; 89, 255; 98, 341; 100, 334 (44, 451); 104, 166; 106, 25; 107, 354; 113, 176; 118, 210 (51, 143)
- Gaida, G. 76, 258 (37, 465); 102, 230; 105, 362
- Gail, H.-P. 76, 158; 77, 165; 86, 380
- Galecki, Z. 122, 207
- Gallagher, J.S. 106, 109
- Galletta, G. 77, 363; 81, 179; 112, 361; 113, 344; 122, 137
- Ganas, P.S. 80, 329 (38, 313); 85, 267 (40, 259); 103, 209 (46, 101)
- Garcia-Alegre, M.C. 83, 163; 96, 17; 106, 261
- Garcia-Pelayo, J. 87, 252 (41, 9)
- Gardner, F.F. 107, 110; 117, 145; 121, 265
- Gargaud, M. 106, 197
- Garlick, A.R. 73, 171; 73, 337; 89, 48
- Garnier, R. 72, 277; 81, 387 (39, 7); 94, 350; 95, 395 (43, 257); 105, 284
- Garrido, R. 73, 365 (36, 51); 79, 347; 83, 114; 122, 193
- Garrigue, J.P. 81, L13
- Gary, D.E. 88, 218; 124, 103
- Gathier, R. 102, 237; 106, 229; 116, L5; 127, 320; 128, 325
- Gatley, I. 105, 229
- Gauthier, S. 117, 164
- Gautier, D. 81, 152
- Gavazzi, G. 72, 1; 84, 228; 97, 128; 100, 323; 103, 35; 119, 165 (51, 321)
- Geballe, T.R. 127, 417
- Gebler, K.-H. 71, 198; 86, 268 (40, 351)
- Geffert, M. 103, 78; 118, 201; 127, 415
- Gehlich, U.K. 79, L16; 101, 191; 113, 213
- Gehren, T. 75, 73; 100, 97; 109, 187
- Geiss, J. 93, 189
- Geisse, H.S. 103, 207 (46, 7)
- Geldzahler, B.J. 76, L21; 84, 237; 98, 205
- Gemünd, H.-P. 117, L5
- Genova, F. 78, 323; 86, 342; 86, 349; 98, 133; 103, 210 (46, 135); 104, 229; 127, 424 (54, 135)
- Genty, V. 103, 207 (49, 13)
- Genzel, R. 72, 234; 73, 253; 78, 239; 79, 233
- Georgelin, Y. 77, L10; 128, 140
- Georgelin, Y.M. 97, 342; 110, 185; 115, 61
- Georgelin, Y.P. 97, 342; 110, 185; 115, 61
- Gérard, E. 83, 38; 97, 195; 99, 320; 113, L1
- Gerassimenko, M. 82, 265; 91, 377
- Gerbai, D. 78, 252 (38, 295); 83, 95; 87, 132; 87, 165; 95, 18; 96, 235
- Gerbaldi, M. 103, 210 (46, 151)
- Gerbault, A. 103, 210 (46, 135); 127, 424 (54, 135)
- Gergely, T.E. 77, 110
- Gerola, H. 98, 371
- Gershberg, R.E. 89, 123
- Geyer, E.H. 77, 61; 80, 248; 108, 416 (48, 85); 125, 359
- Ghosh, S.K. 128, 255
- Giallongo, E. 114, L1
- Giangrande, A. 71, L9; 86, 267 (40, 289); 112, 179 (49, 511); 119, 285
- Gianni, G. 127, 169
- Giannone, P. 74, 57; 85, 113; 85, 252; 96, 254; 98, 344; 102, 250; 102, 386; 103, 424; 118, 332; 121, 183; 121, 188
- Giannuzzi, M.A. 77, 214; 103, 111; 104, 81; 125, 302
- Giardinelli, S. 109, 123
- Giaretta, D.L. 71, L22; 75, 273; 78, 328; 88, 113; 90, 318; 122, 64
- Gibson, A.I. 126, 1
- Gieren, W. 82, 393 (39, 153)
- Giese, R.H. 77, 223; 104, 42
- Gieseking, F. 73, 365 (36, 37); 75, 261 (36, 457); 88, 284 (41, 245); 95, 209 (43, 33); 99, 155; 106, 179 (46, 365); 112, 179 (49, 497); 112, 395 (49, 673); 118, 102
- Giguere, P.T. 108, 221
- Gil, J. 104, 69; 115, 270; 123, 7; 127, 267
- Giler, M. 82, 110; 84, 44
- Gillespie, A.R. 73, 14; 91, 257
- Gillet, D. 128, 53; 128, 384
- Gilmore, W. 95, 32
- Gilmozzi, R. 85, L4
- Gilra, D.P. 81, 223; 102, 237; 108, 111; 109, 182
- Giménez, A. 87, 252 (41, 9); 115, 321; 122, 193; 128, 17
- Ginestet, N. 71, 273 (35, 203); 74, 113; 81, 333; 107, 215; 115, 23; 121, 331 (52, 293); 127, 425 (54, 187)
- Gioia, I.M. 75, 259 (36, 347); 85, 101; 89, 252 (41, 329); 96, 58; 105, 200; 116, 164; 119, 163 (51, 179); 123, 359 (52, 411)
- Giovannelli, R. 114, 208; 121, 5
- Giovannelli, F. 86, 267 (40, 289); 95, 138; 107, 376; 125, 121; 125, 126
- Giovannini, G. 71, 272 (35, 169); 73, 40; 85, 101; 92, 296; 100, 323; 105, 200; 115, 423; 119, 163 (51, 179); 119, 165 (51, 321); 123, 359 (52, 411); 126, 311
- Giraud, E. 121, 26
- Gisler, G.R. 76, 109
- Gispert, R. 76, 259; 77, 155; 94, 265; 106, 293
- Giuricin, G. 73, 31; 73, 369 (36, 273); 76, 369 (37, 513); 79, 354; 80, 9; 81, 388 (39, 73); 82, 386; 82, 394 (39, 235); 82, 395 (39, 255); 82, 395 (39, 265); 82, 395 (39, 273); 83, 217; 84, 268 (40, 57); 85, 29; 85, 259; 86, 264; 91, 254; 91, 261 (42, 15); 94, 201; 94, 204; 94, 391; 95, 395 (32, 251); 96, 409; 96, 415; 97, 206; 97, 410; 99, 182; 101, 138; 101, 418 (45, 85); 102, 282 (45, 499); 103, 349; 109, 366; 111, 86; 111, 210 (49, 89); 114, 74; 118, 209 (51, 111); 119, 218; 121, 42; 122, 333; 125, 368; 125, 388; 126, 86; 128, 260 (54, 211)
- Glass, I.S. 107, 276; 115, 84
- Glassgold, A.E. 89, 113; 98, 371
- Glatzel, W. 93, 395; 94, 306
- Gleizes, F. 110, 181 (48, 363)
- Glencross, W.M. 83, 65; 85, 119; 97, 415 (43, 353); 101, 184; 106, 339
- Glentzlin, M. 103, 207 (46, 1); 110, 181 (48, 371); 121, 330 (52, 265)
- Gliese, W. 80, 331 (38, 423); 85, 350; 99, 205 (44, 131); 107, 413 (47, 471)
- Glowinski, R. 96, 1
- Göbel, W. 93, 43
- Godefroid, M. 84, 361
- Godoli, G. 116, 188
- Goerigk, W. 120, 63
- Golay, M. 85, 311; 107, 415 (47, 547)
- Goldberg, L. 104, L7
- Goldman, I. 78, L15; 90, 44; 97, 219; 102, 12; 115, 242
- Goldsmith, P.F. 82, 337
- Gómez, A. 127, 1
- Gómez, A.E. 81, 142; 93, 155; 100, 24; 120, 53
- Gomez, M.T. 92, 63
- Gomez, R. 111, 266; 117, 170
- Gómez-González, J. 104, 83; 122, 219; 123, L5
- Gomide, F.M. 95, 362

- Goncz, G. 84, 304; 96, 138; 110, 1
 Gondhalekar, P.M. 85, 272
 Gondoin, P. 119, 166 (51, 353)
 González, S.F. 118, 209 (51, 71); 124, 153 (53, 81)
 Gonzalez-Riestra, R. 119, 227
 Good, J.C. 127, L10
 Goossens, M. 75, 83; 79, 210; 95, 240; 102, 282 (45, 487); 109, 166; 115, 413
 Gopal-Krishna 81, 328; 86, L3; 88, 354; 89, 169; 90, L1; 101, 315; 113, 150; 123, 107
 Gordon, C. 81, 43; 103, 69
 Gorenstein, M.V. 95, 386
 Goret, P. 102, L9
 Goss, W.M. 71, 270 (35, 1); 72, 224; 73, L17; 73, 366 (36, 135); 74, 100; 74, 366 (36, 135); 76, 1; 76, 230; 78, 75; 80, 260; 82, L1; 84, L1; 88, 267; 89, 150; 90, 176; 93, 106; 94, L25; 103, 50; 104, 127; 106, 167; 106, 180 (46, 389); 106, 229; 108, 412; 110, 100; 112, 120; 115, 164; 115, 223; 115, 373; 117, 115; 117, 172 (50, 451); 118, 157; 119, L3; 119, 185; 120, 74; 122, 143; 127, 320; 127, 361; 128, 325
 Gottesman, S.T. 84, 85
 Goudis, C. 78, 373; 83, 79; 84, 167; 85, 128; 105, 329; 117, 127
 Gough, D.O. 73, 121; 79, 260; 79, 260; 79, 269; 104, 173
 Gouguenheim, L. 74, 172; 76, 176; 86, 269 (40, 355); 88, 32; 88, 108; 99, 402 (44, 217); 106, 182 (47, 171); 113, 61; 114, 421 (50, 101); 118, 4
 Gould, R.J. 76, 306
 Gouttebroze, P. 93, 415; 103, 160; 121, 59; 125, 241
 Goy, G. 88, 370; 91, 263 (42, 91)
 Graczyk, M. 122, 207
 Graham, D.A. 73, 46; 85, 353; 87, 282; 93, 79; 96, 316; 97, 388; 100, 107; 106, 180 (46, 421); 109, 145; 122, 177
 Granes, P. 102, 282 (45, 483); 111, 211 (49, 105); 126, 221 (53, 361)
 Granitzky, L.V. 116, 312
 Grappin, R. 105, 6; 126, 51
 Grasdalen, G.L. 90, 290; 92, 238
 Graser, U. 110, 138
 Grasshoff, M. 78, 275; 90, 176; 101, 238
 Gratton, R.G. 115, 171; 115, 336; 123, 147; 123, 289
 Gräve, R. 95, 391; 98, 260; 105, 192; 117, 332
 Grec, G. 77, 347; 77, 351; 78, 335; 79, 1; 94, 95
 Greenberg, J.M. 77, 37; 77, 66; 78, 100; 86, L1; 88, 194; 93, 35; 95, 215; 98, 422; 109, L12; 117, 132; 119, 324 (51, 389)
 Greenstein, J.L. 80, 79; 127, 25
 Greggio, L. 98, 336; 118, 217
 Gregorini, L. 75, 259 (36, 347); 89, 252 (41, 329); 96, 58; 97, 251; 105, 200; 116, 164; 118, 171; 119, 163 (51, 179); 123, 359 (52, 411); 126, 311
 Gregory, P.C. 84, 379
 Greisen, E.W. 75, 44; 100, 332 (44, 363); 100, 332 (44, 371)
 Grenier, J.S. 127, 1
 Grenier, S. 81, 142; 93, 155; 100, 24
 Grenon, M. 103, 208 (46, 25)
 Greve, A. 82, 388; 90, 224; 90, 231; 90, 239; 92, 22; 93, 76; 111, 171; 111, 185; 115, 79
 Grève, J.P. de 75, 255
 Grevesse, N. 87, 242; 108, 127; 108, 201; 112, 337
 Grewing, M. 115, 128
 Griensmith, D. 79, 329
 Griffin, R. 71, 36; 71, 36; 82, 385; 82, 385; 92, 70; 92, 70; 92, 325 (42, 391); 92, 325 (42, 391)
 Griffin, R.F. 91, 112; 106, 221
 Grilli, F. 124, 155 (53, 139)
 Grindlay, J. 81, 185
 Grønbech, B. 120, 278
 Gronenschild, E.H.B.M. 77, 53; 81, 185; 85, 66; 101, 417 (45, 11); 110, 180 (48, 305)
 Groot, M. 117, 53; 117, 368; 120, 89; 125, 75
 Groote, D. 83, L5; 94, L23; 114, 420 (50, 77); 116, 64; 119, 319; 123, 257; 124, 154 (53, 91)
 Gros, M. 93, 150
 Grosbøl, P. 107, 23
 Grosbøl, P.J. 87, 339
 Grossmann-Doerth, U. 95, 366
 Gruber, G.M. 102, L21
 Gruber, M.D. 102, L21
 Grubissich, C. 86, 269 (40, 367)
 Gruëff, G. 72, 380 (35, 371); 86, 50; 87, 252 (41, 21); 99, 403 (44, 241)
 Gruschinske, J. 77, 341; 95, 244; 101, 323; 104, 249; 121, 85
 Gry, C. 120, 58; 124, 99
 Guallino, G. 77, 369; 111, 211 (49, 107)
 Guarnieri, A. 86, 267 (40, 289); 95, 177; 100, 330; 117, 149; 118, 365
 Güdür, N. 73, 365 (36, 65); 85, 265 (40, 145); 118, 208 (51, 27); 126, 221 (53, 363)
 Guélin, M. 99, 239; 107, 107; 109, 23; 128, 355
 Guenther, D.B. 118, 262
 Guérin, J. 113, L1; 121, L4
 Guerrero, G. 75, 262 (36, 471); 78, 250 (38, 181); 104, 169 (46, 173); 126, 222 (53, 395); 126, 222 (53, 399)
 Guibert, J. 81, 1; 84, 311; 85, L1; 90, 88; 97, 1; 104, 1; 128, 69
 Guiderdoni, B. 109, 355
 Guidi, I. 105, 184; 122, 151; 128, 438
 Guidoni, U. 85, L4; 96, 215
 Guilbert, P.W. 111, L9
 Guilloteau, S. 97, 213; 97, 347; 101, L19; 114, 238; 116, 101; 124, 322; 126, 10
 Guinet, C. 79, 256
 Guinot, B. 105, 359
 Guiraud, F.O. 95, 304
 Gull, T.R. 114, 414; 125, 320
 Gülmen, Ö. 73, 365 (36, 65); 85, 265 (40, 145); 118, 208 (51, 27); 126, 221 (53, 363)
 Gunn, J.E. 106, 221
 Gupta, S.K. 81, L3
 Gupta, U. 82, 163; 91, 194
 Gurtovenko, E.A. 101, 132; 104, 170 (46, 239); 106, 378 (47, 193)
 Gurzadyan, V.G. 86, 315; 95, 39; 114, 71
 Gustafson, B.A.S. 93, 35; 98, 422
 Gustafsson, B. 74, 313; 89, 255; 115, 145
 Güsten, R. 87, 6; 91, 379 (42, 163); 99, 27; 103, 197; 117, 343; 125, 136
 Gutierrez, J. 78, 65
 Haarala, S. 118, 208 (51, 47)
 Haass, J. 108, 265
 Habets, G.M.H.J. 104, 170 (46, 193)
 Habing, H.J. 71, 273 (35, 179); 73, 368 (36, 193); 81, L11; 86, 254; 95, 156; 95, 171; 108, 412; 127, 73; 128, 230
 Hack, M. 71, 310; 74, L4; 75, 316; 81, L1; 99, 185; 106, 98; 107, 200; 113, 250; 126, 115
 Hadjemetriou, J.D. 93, 204
 Haefner, R. 77, 7; 109, 171; 127, 413
 Haensel, P. 90, 70; 102, 299; 126, 121
 Hafkenscheid, G.A.M. 117, 277
 Hagen, W. 86, L1; 114, 245; 117, 132; 119, 324 (51, 389)
 Hahn, G. 87, 254 (41, 117); 99, 404 (44, 317); 107, 414 (47, 533); 114, 420 (50, 73); 127, 426 (54, 191)
 Haisch, B.M. 72, 161; 75, 260 (36, 377)
 Hakim, R. 80, 71
 Hakkila, J. 119, 326 (51, 541)
 Halbwachs, J.L. 99, 203 (44, 43); 102, 191; 107, 414 (47, 523); 128, 399
 Hall, A.N. 84, 40
 Hall, D.S. 117, 149
 Hallin, R. 106, 327
 Halpern, J.B. 107, 385
 Hamann, W.-R. 84, 342; 93, 353; 100, 169; 104, 249; 116, 273; 118, 245; 121, 85
 Hameury, J.M. 90, 359; 103, 63; 111, 242; 121, 259; 128, 369
 Hammer, R. 73, 190; 74, 229; 120, 141
 Hammerschlag-Hensberge, G. 76, 245; 85, 119; 97, 415 (43, 353); 99, 204 (44, 83); 101, 184; 106, 339; 124, 197

- Hamzaoglu, E. 94, 25; 99, 392; 104, 65; 106, 176; 109, 131; 110, 105; 114, 373; 114, 419 (50, 1); 117, 172 (50, 523); 118, 210 (51, 127); 123, 358 (52, 395); 123, 359 (52, 399)
- Hanasz, J. 91, 311
- Handbury, M.J. 77, 152
- Hänel, A. 78, 249 (38, 155)
- Hanisch, R.J. 111, 97; 116, 137
- Hanner, M. 82, 328; 110, 355
- Hanner, M.S. 104, 42
- Hansen, C.J. 85, 263
- Hansen, L. 126, 223 (53, 427)
- Hansmeier, A. 100, 326
- Hanuschik, R.W. 120, 269
- Hardorp, J. 88, 334; 91, 221; 96, 123; 105, 120; 107, 311; 127, 277
- Harmanec, P. 115, 138; 117, 172 (50, 481)
- Harpaz, A. 93, 200; 95, 66
- Harris, A.W. 91, 1; 92, L9; 99, 285; 115, 257
- Harris, D.E. 82, 394 (39, 215); 90, 283; 92, 324 (42, 319); 111, 299
- Harris, H.J. 74, 247
- Harris, I. 121, 124
- Harrison, A.B. 126, 1
- Harten, R. 89, 140
- Harten, R.H. 72, 224; 89, 150; 94, 231; 100, 28; 100, 42; 100, 332 (44, 363); 100, 332 (44, 371); 103, 50; 107, 354; 111, 212 (49, 137); 125, 320
- Hartl, H. 85, 356; 95, 209 (43, 75)
- Hartman, R.C. 127, 220
- Hartmann, K. 128, 37
- Hartquist, T.W. 75, 137; 77, 361
- Harvey, C.C. 126, 293
- Harvey, J.W. 94, 95; 106, 181 (47, 145); 121, 164 (52, 161)
- Harwit, M. 75, 34; 107, 186
- Haschick, A.D. 78, 239
- Hascoët, J.C. 115, 217 (50, 195)
- Hasegawa, T. 98, 186
- Haser, L. 128, 207
- Haslam, C.G.T. 73, 366 (36, 95); 73, 369 (36, 237); 74, 361; 76, 92; 76, 120; 81, 240; 88, 285; 92, 57; 95, 393 (43, 155); 98, 286; 100, 209; 103, 405; 106, 181 (47, 1); 109, 145; 128, 268
- Hassan, M.H.A. 121, 10
- Hassan, S.M. 106, 379 (47, 247)
- Hatter, A.T. 84, 78
- Hauck, B. 80, 331 (38, 449); 84, 268 (40, 1); 89, 253 (41, 405); 90, 83; 92, 289; 95, 393 (43, 191); 99, 207; 101, 419 (45, 97); 104, 171 (46, 281); 108, 373; 114, 23; 127, 231
- Haug, U. 80, 119; 84, 23
- Haupt, H. 71, 260
- Hauschildt, M. 112, 386; 114, 407
- Havlen, R.J. 79, 70
- Havnes, O. 75, 197; 90, 106; 92, 151; 110, 203
- Hawarden, T.G. 74, 100; 76, 230
- Hawkins, M.R.S. 76, 46; 124, 216
- Hayakawa, S. 100, 116
- Hayes, M.A. 124, 279
- Hayles, R.I. 117, 38; 126, 400
- Hayli, A. 122, 137
- Haymes, R.C. 79, 88
- Haynes, M.P. 121, 5
- Haynes, R.F. 81, 83; 87, 292; 87, 299
- Hazlehurst, J. 78, 303; 84, 200; 109, 117
- Hearn, A.G. 79, L1; 98, 230; 98, 241; 98, 246; 114, 303; 116, 296; 125, 69
- Heasley, J.N. 79, 14
- Heber, U. 101, 269; 102, 73; 116, 273; 118, 39
- Heck, A. 74, L18; 79, 223; 81, 142; 82, 370; 83, 287; 85, 93; 89, 225; 92, 324 (42, 311); 93, L5; 93, 155; 100, 24; 106, 115; 107, 205; 109, 274; 111, 120; 116, 80; 120, 302
- Heckathorn, J.N. 114, 414
- Heckman, T.M. 76, L7; 79, 350; 83, 100; 86, 267 (40, 295); 87, 142; 87, 152; 88, 311; 88, 365; 96, 271; 106, 163
- Hedin, B. 95, 395 (43, 267)
- Hefe, H. 88, 145; 94, 280; 108, 102; 128, 262 (54, 309)
- Hege, E.K. 71, 163
- Heidmann, J. 73, 216; 76, 370 (37, 559); 89, 345; 105, 188
- Heidmann, N. 72, 293; 83, 190; 87, 36
- Heil, T.G. 89, 379
- Heiles, C. 73, 366 (36, 95); 84, 268 (40, 47); 118, 157
- Heintz, W.D. 107, 415 (47, 569)
- Heintze, J.R.W. 104, 170 (46, 193)
- Heintzmann, H. 74, 263; 111, L4
- Heinzel, P. 121, 155
- Heinzinger, K. 74, 369
- Heise, J. 81, 185; 84, 280
- Hejlesen, P.M. 83, 384 (39, 347); 84, 135; 121, 241
- Helfer, H.L. 86, 231; 94, 109; 119, 163 (51, 195)
- Hellings, P. 95, 14; 101, 161
- Hellmich, R. 93, 341
- Helmer, G. 111, 151
- Helmer, L. 89, 57; 111, 209 (49, 13); 125, 176 (53, 223)
- Hempe, K. 98, 19; 107, 36; 115, 133; 126, 220 (53, 339); 126, 225
- Henderson, A.P. 75, 311; 99, 203 (44, 63)
- Henkel, C. 73, L13; 82, 41; 91, 36; 98, L4; 99, 270; 101, 238; 107, L10; 109, 344; 117, 145; 125, 136; 127, 388
- Henning, K. 100, 333 (44, 405)
- Hénon, M. 114, 211
- Hénoux, J.-C. 80, 123; 91, 322; 108, 61; 118, 139; 119, 233
- Henrard, J. 86, 221
- Henriksen, R.N. 75, 133
- Henry, G.W. 117, 149
- Hensberge, H. 72, 378 (35, 301); 75, 83; 77, 286; 78, 287; 87, 369; 96, 151; 103, 210 (46, 151); 104, 150; 106, 137
- Hensler, G. 74, 284; 114, 309; 114, 319
- Herbst, E. 111, 76
- Herbst, W. 86, 68
- Herczeg, T. 104, 256
- Hering, R. 115, 197
- Heristchi, D. 119, 233
- Herman, J. 81, L11
- Hermesen, W. 90, 163; 91, L3; 93, 71; 94, 116; 105, 164; 107, 390; 111, 233; 115, 404; 128, 245
- Hernandez, G. 94, 1
- Herold, H. 94, 194; 100, 164; 115, 90; 117, 156; 126, 251
- Herpe, G. 83, 384 (39, 395)
- Herter, T. 86, 231; 94, 109; 109, 223; 119, 163 (51, 195)
- Heske, A. 113, 170
- Hetterich, N. 125, 246
- Heudier, J.L. 127, 426 (54, 191)
- Heydari-Malayari, M. 84, 154; 102, 316; 111, L11; 113, 118; 118, 116
- Heyvaerts, J. 78, 53; 79, 164; 83, L10; 90, 359; 96, 36; 111, 104; 111, 242; 117, 220; 121, 259; 124, L1; 127, 153; 128, 369
- Hibbert, A. 95, 24
- Higgs, L.A. 82, 393 (39, 133); 84, 379; 103, 370
- Hilaire, G. 115, 216 (50, 147)
- Hildebrand, R.H. 110, L18
- Hill, G. 91, 264 (42, 135)
- Hill, P. 88, L12; 108, 157
- Hill, P.W. 106, 254
- Hillebrandt, W. 74, 175; 80, 147; 81, 288; 82, 288; 91, 381 (42, 215); 99, 195; 103, 147; 103, 358; 110, L3; 125, 381; 128, 411
- Hills, D.L. 88, 285
- Himmes, A. 86, 11
- Hinteregger, H.F. 86, 364
- Hintzen, P. 74, 116
- Hippelein, H. 81, 189; 95, 100; 99, 248; 105, 329; 117, 127
- Hirata, R. 121, 174
- Hirth, W. 72, 211; 92, 225; 93, 43; 107, 178; 113, 340; 115, 428
- Hjalmarsen, A. 97, 192; 100, L30; 107, 128; 113, L18
- Ho, P.T.P. 74, L7; 113, 155; 125, 271
- Hoang-Binh, D. 112, L3; 121, L19
- Hobart, M.A. 118, 209 (51, 71)
- Hobbs, R.W. 92, 320
- Hocking, W.H. 75, 268
- Hockney, R.W. 78, 133
- Hoekstra, R. 78, 292; 115, 217 (50, 233)
- Hoessel, J.G. 84, 317
- Hoffmann, M. 75, 261 (36, 457); 80, 248; 85, 267 (40, 263); 107, 415 (47, 561); 108, 416 (48, 85)

- Höflich, P. 112, 76
Hofmann, H. 82, 256; 126, 415
Hofmann, R. 128, 207
Hofmann, R.G. 116, 179
Høg, E. 75, L4; 101, 228; 122, 57
Högbom, J.A. 73, 368 (36, 173)
Hogg, D.C. 95, 304
Höglund, B. 83, 226; 118, 306
Hohlfeld, R.G. 95, 386
Hollis, J.M. 126, 393
Holm, A. 88, L9; 99, 166; 112, 341
Holm, A.V. 85, 1
Holmberg, E.B. 82, 394 (39, 173); 97, 415 (43, 307); 104, 172 (46, 311)
Holt, S.S. 87, 292
Holwegger, H. 92, 70; 92, 325 (42, 391); 99, 192
Holys, A. 90, 14
Hölzle, E. 88, 145; 94, 280
Hong, S.S. 88, 194
Hood, A.W. 77, 233; 87, 126
Hooghoudt, B.G. 93, 76
Hopkins, J.L. 117, 149
Hopp, U. 77, 61; 89, 227; 109, 238; 124, L13; 125, 359
Höppner, W. 109, 117
Horani, M. 125, L5
Horedt, G.P. 92, 267; 106, 29; 110, 209
Horstman, H.M. 75, 240; 86, 36; 122, 119
Hough, J.H. 91, 379 (42, 141)
House, F. 81, 251
House, L. 111, 306
House, L.L. 116, 217
Houston, B.P. 126, 22
Houten, C.J. van 71, 273 (35, 213)
Houten-Groeneveld, I. van 71, 273 (35, 213)
Houziaux, L. 84, 377
Hovenier, J.W. 82, 61; 128, 1
Howarth, I. 85, 119
Howarth, I.D. 83, 270; 93, 219; 97, 415 (43, 353)
Hoyng, P. 91, 7; 91, 17
Høyer, P.J. 99, 205 (44, 151); 101, 228
Hua, Chon-Trung 90, 8; 94, 12; 98, 397; 101, 187; 116, 312; 117, 272; 126, 222 (53, 407)
Huang, J.-H. 113, 9; 117, 205
Huang, K.-L. 113, 9; 117, 205
Huang, R.Q. 112, 281; 116, 348; 127, 309
Huang Chang Chun 104, 171 (46, 257); 106, 179 (46, 369)
Huba, J.D. 105, 221
Hube, D.P. 99, 203 (44, 59); 124, 151 (53, 29)
Hubený, I. 86, 225; 98, 96; 100, 314; 127, 224
Huber, M.C.E. 86, 95; 87, 242; 126, 320
Hubert, H. 91, 263 (42, 103); 99, 204 (44, 109); 121, 174
Hubert-Delplace, A.M. 86, 72; 91, 263 (42, 103); 99, 204 (44, 109); 121, 174
Hucht, K.A. van der 75, 260 (36, 377)
Huchtmeier, W.K. 74, 138; 75, 179; 78, 82; 89, 95; 91, 259; 91, 341; 100, 72; 102, 134; 109, 155; 109, 331; 110, 121; 111, 193; 119, 80; 125, L19; 125, 187
Hudson, H. 120, 150
Huebner, W.F. 108, 221
Huels, S. 128, 260 (54, 221)
Hughes, D.W. 87, 136
Hughes, V.A. 80, 186; 106, 171; 111, 358; 123, 360 (52, 463); 128, 434
Huguénin, D. 83, 199
Huizenga, H. 84, 280
Hulst, J.M. van der 75, 97
Hultqvist, L. 98, 341; 115, 145
Hummel, E. 73, 196; 79, L26; 81, 316; 88, 282 (41, 151); 89, L1; 93, 93; 96, 111; 96, 310; 97, 413; 106, 183; 114, 400; 115, 293; 127, 205
Hunger, K. 83, L5; 88, L4; 95, 244; 98, 211; 101, 269; 107, 93; 114, L11; 116, 64
Hunter, S.D. 127, 220
Huntress, W.T., Jr. 114, 275
Hurford, G.J. 94, 67; 120, 150
Hurley, K. 79, L24; 100, L1; 103, 428; 109, L9; 120, 150; 126, 400
Hut, P. 92, 167; 94, L19; 94, 327; 99, 126; 101, 134; 106, 245; 110, 37; 116, 351; 127, 161
Hutchings, J.B. 91, 264 (42, 135)
Hutschenreiter, G. 106, 112
Iannicola, G. 118, 209 (51, 83); 124, 151 (53, 1); 126, 278
Ibáñez, J. 124, 175
Ibáñez, J.M. 98, 390
Ibanoglu, C. 73, 365 (36, 65); 85, 265 (40, 145)
Ibrahim, A. 103, 390
Ichtiaroglou, S. 81, 30; 81, 88; 90, 102; 90, 324; 92, 139; 98, 401
Icke, V. 74, 42; 78, 21; 78, 352
Iervolino, R. 121, 142
Iess, L. 121, 203
Iijima, T. 94, 290; 101, 397; 116, 210; 123, 360 (52, 443)
Illing, R. 111, 306; 116, 217
Illovaisky, S.A. 71, L17; 75, 258; 81, 368; 90, 113; 93, L3; 94, L3; 99, 274; 100, L1; 101, 184; 102, 31; 103, 428; 106, 339; 109, L1; 110, 316; 111, L9; 112, 68; 114, L7; 119, 171
Imbert, M. 75, 261 (36, 453); 80, 331 (38, 491); 86, 259; 92, 324 (42, 331); 98, 198; 99, 404 (44, 319); 106, 380 (47, 319); 124, 153 (53, 85)
Inoue, K. 128, 128
Inoue, M. 83, 384 (39, 379)
Ip, W.-H. 81, 260; 92, 95
Irvine, W.M. 71, 123; 97, 192; 97, 195; 127, L10
Irwin, A.W. 117, 173
Isaacman, R. 77, 327; 81, 359; 86, 254; 95, 46; 97, 416 (43, 405); 102, 347; 113, 231
Isaak, G.R. 91, L9
Isern, J. 117, L1; 124, 39
Ishwar, B. 71, 40
Israel, F.P. 90, 246; 102, 257; 103, 50; 105, 229
Isserstedt, J. 75, 261 (36, 423); 78, 250 (38, 239); 83, 317; 83, 322; 85, 201; 91, 147; 93, L5; 96, 133; 96, 181; 114, 419 (50, 7); 115, 97; 119, 326 (51, 505); 126, 183; 126, 216
Iyengar, K.V.K. 103, 382; 128, 207; 128, 255
Jackson, P. 77, 372 (38, 89)
Jackson, P.D. 78, 250 (38, 197); 88, 283 (41, 211); 117, 171 (50, 377)
Jackson, W.M. 73, L7; 107, 385
Jaeggi, M. 107, 88; 109, 305
Jaffe, D. 76, 86
Jaffe, W. 103, 35
Jägers, W.J. 105, 278; 112, 180 (49, 529); 125, 172; 127, 235
Jahreiss, H. 80, 331 (38, 423); 85, 350
Jakate, S.M. 84, 374
Jakobsen, P. 81, 66; 88, 52; 96, 23; 106, 375; 124, 300
Jamar, C. 89, 22; 91, 247; 96, 380; 99, 401 (44, 171)
James, J.F. 103, 131
Jameson, R.F. 71, 326; 88, 320
Janaszak, E. 122, 207
Jankovics, I. 125, 177 (53, 291)
Janot-Pacheco, E. 81, 368; 99, 274
Jantzen, R.T. 114, 219
Jarzebowski, T. 118, 294
Jaschek, C. 71, 270 (35, 75); 81, 142; 85, 266 (40, 207); 89, 380; 91, 263 (42, 103); 91, 263 (42, 115); 93, 155; 100, 24; 117, 357; 126, 438; 127, 1
Jaschek, M. 71, 270 (35, 75); 81, 142; 85, 266 (40, 207); 89, 380; 91, 263 (42, 103); 91, 263 (42, 115); 93, 155; 100, 24; 107, 215; 110, 181 (48, 363); 117, 357; 126, 438; 127, 1
Jasniewicz, G. 111, 211 (49, 99)
Jauncey, D.L. 87, 292
Jefferies, J.T. 71, 14
Jeffers, S. 92, 196
Jeffreys, K.W. 92, 323 (42, 285)
Jegou, R. 126, 293
Jelénković, B. 106, 327
Jenknor, H. 95, 394 (43, 209); 106, 379 (47, 221)
Jennings, R.E. 82, 86; 90, 304
Jensen, K.S. 75, 260 (36, 395); 102, 281 (45, 455)
Jerzykiewicz, M. 118, 294

- Jie-Hao Huang 107, 258
 Jiménez, J. 111, 260
 Johansson, K.L.V. 87, 253 (41, 43); 97, 417 (43, 421); 99, 205 (44, 127)
 Johansson, L.E.B. 80, 260; 97, 317; 107, 128
 John, T.L. 75, 249
 Johnson, H.R. 111, 210 (49, 77)
 Johnson, P.G. 84, 167; 85, 128
 Johnson, R.E. 123, 343
 Johnston, K.J. 78, 239; 79, 233; 101, 49; 108, 157
 Joly, M. 72, 293; 76, 257 (37, 361); 78, 200; 83, 190; 93, 362; 102, 321
 Jonas, G. 125, 34
 Joncas, G. 94, 134; 111, 117
 Jones, B. 76, 60
 Jones, B.B. 73, 46
 Jones, B.C. 76, 179; 81, 128
 Jones, B.J.T. 120, 165
 Jones, D.H.P. 89, 225
 Jones, F.C. 85, 316
 Jong, T. de 75, 326
 Jordan, C. 86, 355
 Jörsäter, S. 97, 56; 110, 336
 Joss, P.C. 71, 217
 Joubert, M. 106, 16; 109, 179; 128, 114
 Jouchoux, A. 93, 415
 Jousson, M. 96, 189
 Jørgensen, H.E. 72, 356; 72, 378 (35, 277); 108, 99; 122, 301
 Ju, K.H. 112, 396 (49, 715)
 Juliusson, E. 102, L9

 Kaastra, J.S. 99, 7; 109, L5; 122, 177
 Kadiri, S. 99, 232
 Kafatos, M. 92, 320; 109, 136
 Kähler, H. 72, 55; 75, 207
 Kahn, F.D. 83, 303
 Kaiser, D. 115, 218 (50, 261)
 Kaisig, M. 116, 332; 117, 305
 Kalberla, P.M.W. 82, 275; 83, 384 (39, 337); 92, 323 (42, 299); 106, 167; 106, 180 (46, 389); 106, 190; 115, 223; 120, 63
 Kalkofen, W. 108, 42; 110, 18
 Kallas, E. 78, L13; 91, 381 (42, 227); 128, 268
 Kaltenbacher, J. 114, 85
 Kaluzienski, L.J. 87, 292
 Kamperman, T.M. 83, 383 (39, 301); 90, 170
 Kanbach, G. 90, 163; 91, L3; 93, 71; 94, 116; 105, 164; 107, 390; 115, 404; 128, 245
 Kandemir, G. 95, 394 (43, 239)
 Kane, L. 84, 115
 Kane, S.R. 108, 306
 Kapahi, V.K. 74, L11; 77, 371 (38, 11); 82, 394 (39, 215); 96, 310; 97, 416 (43, 381); 106, 181 (46, 473)
 Kap-Herr, A. von 74, 93
 Kaplan, G.H. 105, 359

 Käppeler, F. 105, 270
 Kappellmann, N. 78, 249 (38, 161)
 Kapranidis, S. 87, 307; 118, 33
 Karaali, S. 71, 274 (35, 241); 121, 330 (52, 269)
 Karachentsev, I.D. 91, 302
 Karakula, S. 107, 376; 125, 121; 125, 126
 Kardashev, N.S. 93, 85; 109, 340
 Karimie, M.T. 108, 416 (48, 85); 112, 179 (49, 497)
 Karlický, M. 93, 121
 Karman, C. 103, 209 (46, 105)
 Karner, C. 107, 161; 107, 166
 Karpen, J.T. 71, 92
 Kastner, S.O. 71, 211; 108, 361; 128, 181
 Katgert, J.K. 73, 107
 Katgert, P. 73, 368 (36, 213)
 Katgert-Merkelijn, J. 84, 269 (40, 91)
 Katgert-Merkelijn, J.K. 106, 181 (46, 473)
 Kato, K. 113, 135
 Katopodis, K. 90, 102; 90, 324
 Kattenberg, A. 125, 1
 Katz, J.I. 95, L15; 128, L1
 Käufel, H.U. 126, 387
 Kaufmann, J.P. 88, 284 (41, 271); 94, L23; 114, 420 (50, 77); 121, 85; 124, 154 (53, 91)
 Kaufmann, P. 82, 170; 87, 58; 100, 189; 119, 131; 123, 10
 Kayser, R. 128, 156
 Kazanas, D. 128, 102
 Kazès, I. 88, 283 (41, 229); 88, 329; 97, 195; 98, 271; 99, 320; 101, 401; 111, 239; 125, L23
 Kearsy, S. 82, 110; 98, 286; 103, 405
 Keenan, D.W. 71, 245; 95, 334; 95, 340
 Keenan, F.P. 122, 64
 Keenan, P.C. 106, 115
 Kegel, W.H. 77, 373 (38, 131); 91, 262 (42, 59); 92, 204; 119, 101
 Keil, S.L. 82, 144
 Ke-Liang Huang 107, 258
 Keller, H.U. 73, L7; 80, 227; 81, 210; 102, 415
 Kellermann, K.I. 79, 268; 97, L1
 Kelley, R.L. 89, 249
 Kemp, J.C. 91, 108
 Kemp, M. 126, 293
 Kemper, P.R. 114, 275
 Kendziorra, E. 94, 234; 107, 350; 117, 215
 Kennedy, H.D. 118, 325
 Kennel, C.F. 79, 299
 Kennicutt, R. 120, 219
 Kenyon, S.J. 106, 109
 Kepa, A. 116, 158
 Kerdraon, A. 71, 266; 93, 129; 99, 401 (44, 165); 101, 33; 127, 132
 Kern, G.A. 123, 184
 Kerr, F.J. 99, 203 (44, 63)

 Kester, D. 85, 221; 99, 375
 Kesteven, M.J. 113, 211
 Khokhlova, V.L. 71, 295
 Kieboom, K.H. 95, L11
 Kiehl, M. 77, 61
 Kilkenney, D. 81, 251; 106, 254
 Kim, I.S. 114, 347
 Kindl, C. 116, 265
 King, A.R. 71, 326
 King, K.J. 82, 86; 90, 304
 Kingston, A.E. 78, 318; 90, 97
 Kinnander, A. 99, 63
 Kinoshita, H. 105, 359; 128, 128
 Kippenhahn, R. 75, 281; 90, 54; 91, 175; 91, 181; 102, 293; 114, 77; 124, 206
 Kirk, J.G. 82, 262
 Kirkman, I.W. 126, 1
 Kisielski, M. 106, 327
 Kislyakov, A.G. 118, 306
 Kitta, K. 122, 105
 Kiziloglu, Ü. 118, 114; 123, 17
 Kjaergaard, P. 93, 290; 106, 180 (46, 375); 115, 145; 117, 257; 121, 330 (52, 237)
 Klapdor, H.V. 99, 195; 123, 162
 Klare, G. 89, 282; 91, 381 (42, 251); 98, 27; 102, 337; 103, 342; 113, 76; 127, 49
 Klebesadel, R.W. 100, L1; 100, L1; 103, 428
 Klein, J. 79, 256
 Klein, M.J. 86, 46; 94, 91
 Klein, U. 72, 229; 76, 92; 76, 120; 94, 29; 95, 391; 100, 209; 105, 188; 108, 176; 116, 164; 116, 175; 117, 332; 121, 150; 127, 177
 Kleine, T. 76, 133
 Kleinmann, D. 76, 86
 Klimopoulos, S. 77, 371 (38, 1)
 Klinkhamer, F.R. 87, 354; 91, 365; 94, L19; 97, 414; 100, 291; 106, 245; 107, 235
 Klock, B.L. 114, 95
 Klutz, M. 73, 244; 90, 116; 96, 406
 Knacke, R.F. 92, 281
 Kneer, F. 79, 14; 87, 229; 93, 20; 93, 387; 102, 147; 104, 211; 113, 129; 119, 124; 123, 263; 128, 311
 Kneubühl, F.K. 83, 199; 87, L3
 Knight, C.A. 86, 364
 Knobloch, E. 113, 261; 125, 59
 Knoechel, G. 79, 22; 82, 253; 110, 263
 Knowles, N. 94, 1
 Knude, J. 71, 344; 77, 198; 80, 331 (38, 407); 97, 380; 98, 74; 99, 402 (44, 225); 111, 210 (49, 69); 126, 89
 Kobayashi, Y. 119, L1
 Koch, L. 102, L9
 Kodaira, K. 78, 292; 126, 440
 Kodama, T. 93, 309
 Koehlin, L. 80, L13; 103, 28; 115, 253; 120, 263

- Koester, D. 71, 163; 72, 376; 76, 262; 81, 145; 83, L13; 83, 384 (39, 401); 85, 208; 94, 206; 95, L9; 97, 16; 99, L8; 100, 113; 102, 331; 108, 406; 109, 7; 113, L13; 113, L73; 116, 147; 116, 341; 121, 77; 123, L11
- Kogan, L.R. 78, 239; 79, 233
- Kohoutek, L. 76, 133; 78, 39; 85, 161; 92, 200; 94, 365; 100, 331 (44, 325); 114, 147; 115, 420
- Kolesnik, L.N. 76, 124
- Kollatschny, W. 86, 245; 86, 308; 100, L4; 100, 1; 102, L23; 104, 198; 117, 60; 119, 80; 122, 33; 125, 276
- Kollberg, E. 97, 192
- Kolos, R. 122, 207
- Koloso, B.I. 113, 179
- Komesaroff, M.M. 93, 269
- Kondo, Y. 75, 260 (36, 377); 82, 14; 83, 363; 94, 285; 102, 282 (45, 473); 115, 217 (50, 233); 121, 59; 126, L5; 126, 115
- Kondrat'ev, B.P. 79, 35
- Konjević, N. 102, 93
- Kontizas, E. 101, 420 (45, 121); 108, 344; 111, 209 (49, 1); 121, 164 (52, 143); 122, 9
- Kontizas, M. 85, 265 (40, 151); 101, 420 (45, 121); 108, 344; 111, 209 (49, 1); 121, 164 (52, 143); 122, 9
- Koo, D.C. 105, 107
- Koornneef, J. 106, 381 (47, 341); 107, 247; 119, 326 (51, 489); 128, 84
- Köppen, J. 71, 271 (35, 111); 80, 42; 81, 389 (39, 77); 85, L15; 91, 262 (42, 59); 105, 300; 112, 174; 118, 107; 118, 203; 122, 95; 123, 67
- Koppenaar, K. 75, L1
- Korhonen, R. 79, 254
- Korhonen, T. 91, 372
- Kostenko, V.I. 78, 239; 79, 233
- Kostik, R.I. 101, 132; 104, 170 (46, 239); 106, 378 (47, 193); 115, 104
- Kotanyi, C. 99, 403 (44, 241); 83, 245
- Kotanyi, C.G. 73, L1; 74, 156; 89, 253 (41, 421); 106, 183; 122, 267; 127, 205
- Kotov, V.A. 88, 317; 90, 372
- Koubsky, P. 115, 138; 117, 172 (50, 481)
- Koutchmy, O. 90, 372
- Koutchmy, S. 72, 45; 72, 50; 77, 257; 88, 345; 89, 88; 90, 372; 99, 111; 114, 347; 119, 261; 120, 185; 122, 1; 125, 280
- Kovács, N. 120, 21; 124, 63
- Kovalevsky, J. 116, 89
- Kovetz, A. 93, 200; 95, 66
- Kovner, I. 100, 271
- Kowal, C. 99, 403 (44, 229)
- Koyama, S. 117, 277
- Kozlovsky, B.Z. 73, 358; 92, 273
- Kraan-Korteweg, R.C. 104, 280; 107, 414 (47, 505); 125, 109
- Krassner, J. 74, 302; 77, 302; 86, 231; 109, 223; 114, 19
- Krätschmer, W. 92, 281; 122, 105
- Kratz, K.-L. 125, 381
- Krautter, J. 76, 258 (37, 465); 82, 393 (39, 167); 86, 113; 88, L6; 88, L9; 89, 74; 89, 282; 90, 184; 93, 412; 98, 27; 99, 166; 102, 337; 106, 25; 113, 76; 121, 217; 125, 177 (53, 291); 125, 378; 127, 49
- Krebs, J. 88, 363; 128, 411
- Kreidl, T. 81, 59; 106, 379 (47, 221)
- Kreitschmann, J. 87, 175; 111, 255
- Krelowski, J. 113, 176; 122, 207; 127, 271
- Kresák, L. 99, 262
- Kresáková, M. 116, 201; 127, 373
- Kreysa, E. 117, L5; 124, 123
- Krikorian, R. 71, 14
- Krishna Swamy, K.S. 97, 110
- Kristensen, L.K. 100, 332 (44, 375)
- Kron, R.G. 105, 107; 127, 29
- Kronberg, P.P. 73, 369 (36, 237); 86, 268 (40, 319); 95, 208 (43, 19); 108, 416 (48, 137); 121, 332 (52, 317); 125, 146
- Krotscheck, E. 83, 1
- Krpata, J. 115, 138; 117, 172 (50, 481)
- Krügel, E. 105, 342; 110, 181 (48, 345); 117, 289; 124, 89; 127, 195
- Krumm, N. 116, 237
- Krzeminski, W. 85, 106; 94, L29
- Ksanfomaliti, L.V. 123, 225
- Kudritzki, R.P. 77, 341; 85, 174; 88, L4; 91, 360; 95, 244; 98, 211; 99, L15; 101, 276; 101, 323; 104, 249; 106, 254; 108, 387; 114, L11; 118, 245; 121, 85; 125, 34
- Kühne, C. 115, 216 (50, 173); 121, 165
- Kühr, H. 95, 285; 102, 280 (45, 367)
- Kuijpers, J. 83, 201; 100, 291; 103, 331; 114, L4; 122, 177
- Kuin, N.P.M. 96, 325; 108, L1; 112, 366; 114, 303; 123, 216; 125, 69
- Kulkarni, S. 112, 120
- Kundt, R. 82, 394 (39, 245)
- Kundt, W. 80, L7; 83, 1; 91, 305; 98, 207; 120, 227; 121, L15
- Kundu, M.R. 82, 30; 82, 265; 83, 256; 86, 373; 90, 192; 91, 377; 92, 225; 94, 72; 94, 313; 108, 188
- Kunth, D. 71, 335; 73, 369 (36, 259); 76, 50; 76, 346; 85, L11; 99, 403 (44, 229); 101, L5; 103, 305
- Kuperus, M. 113, 324
- Kupo, I. 71, 102
- Kurt, V.G. 79, L24; 126, 400
- Kurtanidze, O.M. 81, 388 (39, 35)
- Kusch, H.J. 71, 44; 75, 182; 116, 255
- Kutschera, M. 102, 299
- Küveler, G. 122, 69; 123, 29
- Kuzmin, A.D. 93, 85; 109, 340
- Kwee, K.K. 126, 94
- Kwiatkowski, M. 103, 108; 108, 127; 112, 337
- Kwok, S. 122, 346
- Labay, J. 117, L1; 124, 39
- Labeyrie, A. 77, L1; 91, 380 (42, 185); 106, 235; 115, 253
- Lacasse, M.G. 86, 231; 94, 109; 104, 57
- Laclare, F. 95, 395 (43, 247); 103, 207 (46, 1); 110, 181 (48, 371); 121, 330 (52, 265); 125, 200; 126, 161
- Lacoarret, M. 102, 282 (45, 483)
- Lacombe, C. 88, 277
- Lacombe, P. 97, 416 (43, 367)
- Lacroix, G. 115, 54; 118, 368
- Lafon, G. 113, 118; 124, 1
- Lafon, J.-P.J. 92, 6; 95, 295; 106, 345; 106, 358; 123, 73; 128, 53
- Lafont, S. 106, 201
- Lagage, P.O. 118, 223; 125, 249
- Lagerkvist, C.I. 84, 269 (40, 119); 87, 254 (41, 117); 99, 202 (44, 15); 99, 203 (44, 43); 99, 404 (44, 317); 100, 332 (44, 345); 100, 333 (44, 401); 101, 417 (45, 1); 102, 279 (45, 177); 103, 207 (46, 21); 104, 148; 104, 296; 107, 412 (47, 447); 107, 414 (47, 513); 107, 414 (47, 533); 114, 420 (50, 23); 114, 420 (50, 73); 115, 218 (50, 277); 119, 166 (51, 341); 124, 155 (53, 157); 127, 426 (54, 191)
- Laget, M. 81, 37; 88, 52; 97, L7
- Lahulla, J.F. 74, 89
- Lakićević, I.S. 127, 37
- Lam, S.K. 75, 260 (36, 399); 99, 401 (44, 189); 115, 217 (50, 195)
- Lambert, D.L. 102, 296; 117, 177; 124, 188; 128, 110
- Lamers, H.J.G.L.M. 78, 250 (38, 227); 79, L28; 79, 223; 79, 230; 80, 1; 80, 330 (38, 367); 82, 48; 85, 119; 86, 271; 87, 68; 90, 204; 91, 32; 97, 415 (43, 353); 101, 161; 105, 85; 106, 137; 123, L8; 128, 299
- Lamontagne, R. 114, 135
- Lampens, P. 115, 413
- Lampton, M. 75, 260 (36, 371); 78, 104; 80, 67; 83, 58
- Lamy, P.L. 72, 45; 72, 50; 77, 257; 92, 6; 95, 295
- Landecker, T.L. 82, 393 (39, 133); 103, 370
- Landgraf, W. 87, 252 (41, 17); 119, 95
- Landi Degl'Innocenti, E. 108, 416 (48, 81); 110, 25; 112, 395 (49, 677); 126, 220 (53, 311)
- Landini, M. 72, 171; 102, 391
- Landis, H.J., 117, 149
- Lang, K.R. 127, 135
- Lange, A. 114, 420 (50, 77)
- Langer, N. 126, 207
- Langer, W.D. 107, 107
- Lantos, P. 82, 30; 101, 33

- Lanzerotti, L.J. 123, 343
 La Padula, C. 106, 174; 108, 249; 127, 333
 Lapasset, E. 95, 328; 114, 419 (50, 13)
 Lapidra, R. 98, 382
 Laporte, C. 87, 58
 Laques, P. 73, 97; 93, 53; 95, 394 (43, 231); 108, 296
 Lari, C. 84, 269 (40, 91); 92, 324 (42, 319); 94, 61; 101, 194; 110, 169
 Laros, J.G. 100, L1; 103, 428
 Larsen, N. 117, 257
 Larson, H.P. 116, 179
 Larsson, M. 83, 238; 128, 291
 Laskarides, P.G. 71, L12
 Lasota, J.P. 95, 138; 128, 369
 Lasry, J.M. 111, 104
 Lattanzi, A. 118, 209 (51, 77)
 Lauberts, A. 71, 270 (35, 55); 82, 394 (39, 173); 95, 266; 97, 415 (43, 307); 104, 172 (46, 311)
 Laubscher, R.E. 82, 392
 Laurent, C. 90, L13; 120, 58; 124, 99
 Laury-Micoulaut, C. 75, 351
 Lausberg, A. 82, 1
 Laustsen, S. 73, 247; 74, 123; 103, 208 (46, 57)
 Laval, A. 97, 342; 115, 61
 Law, W.-Y. 108, 118; 123, 33
 Lay, G. 102, 359
 Lazareff, B. 91, 290; 95, 194; 98, 119
 Lebecq, C. 119, 261
 Lebedev, V.S. 80, 167
 Leblanc, Y. 86, 342; 86, 349; 98, 133; 103, 210 (46, 135); 106, 94; 111, 284; 123, 307; 127, 424 (54, 135)
 Lebofsky, M.J. 99, 108
 Leborgne, J.F. 94, 214; 123, 25
 Le Bourlot, J. 123, 61
 Lebrun, F. 79, 153; 91, L3; 105, 159; 105, 164; 107, 390; 115, 404
 Lecacheux, A. 94, L9; 96, 296; 103, 210 (46, 135); 104, 229; 106, 94
 Lecacheux, J. 108, 296; 111, 151; 113, L1; 121, L4
 Le Contel, J.-M. 72, 313; 76, 15; 97, 415 (43, 359); 107, 406; 118, 294; 122, 193
 Le Denmat, G. 95, 210 (43, 121)
 Ledoux, P. 108, 49
 Lee, P. 91, 331
 Lee, T.J. 101, L1; 127, 417
 Leer, E. 111, 317
 Lee Van Suu, A. 111, 372
 Lefèvre, J. 72, 61; 114, 341; 121, 51
 Legait, A. 88, 345; 108, 287
 Léger, A. 79, 256; 117, 164; 123, 271
 Lehto, H. 118, 208 (51, 47)
 Leibowitz, M. 71, 102
 Leinert, C. 72, 92; 82, 328; 103, 177; 103, 210 (46, 115); 105, 364; 110, 111; 110, 115; 110, 355; 118, 345; 121, 146
 Leinert, G. 74, 15
 Leister, N.V. 75, 260 (36, 401); 110, 181 (48, 371)
 Leiter, D. 89, 370
 Leitherer, C. 108, 102; 120, 287
 Lelièvre, G. 109, 95; 110, L11; 113, L1; 121, L4
 Lemaître, G. 103, L14
 Lemaire, P. 93, 415; 100, 205; 103, 160; 125, 241
 Lemke, D. 74, 133; 99, 285; 119, 294
 Lemonnier, J.P. 121, L4
 Lena, P. 79, L5; 79, 315; 83, 22; 83, 140; 120, 237
 Lenzen, R. 95, 94; 100, 249; 108, 274; 121, 158; 126, 440
 Leonis, G. 85, 168
 Leorat, J. 105, 6; 126, 51
 Lépine, J.R.D. 99, 210
 Lequeux, J. 71, 1; 80, 35; 80, 155; 80, 276; 85, 305; 86, 299; 90, L13; 90, L17; 90, 73; 91, 269; 99, L5; 103, 305; 103, 319; 104, 177; 113, L15; 114, 409; 123, 159; 125, 394; 128, 114
 Lerche, I. 77, 117; 81, 83; 81, 302; 85, 141; 87, 292; 87, 299; 95, 308; 107, 148; 116, 10
 Leroy, B. 78, 129; 91, 136; 97, 245; 104, 203; 112, 84; 112, 93; 125, 371
 Leroy, J.L. 100, 231; 120, L1
 Leroy, M. 106, 345; 106, 358
 Lesh, J.R. 79, 115
 Le Squeren, A.M. 72, 39
 Lestrade, J.-F. 92, 302; 100, 143; 105, 42; 116, 75
 Leubner, C. 96, 373
 Le Van Suu, A. 127, 424 (54, 47)
 Levasseur-Regourd, A.C. 84, 277
 Levin, B.N. 111, 71
 Levreault, R. 104, 57
 Lewin, W. 94, 234
 Lewin, W.H.G. 113, 328
 Lewis, M. 87, 213; 97, 218
 Li, Z.X. 123, 22
 Lichti, G.G. 90, 163; 93, 71; 94, 116; 105, 164
 Lidholm, S. 101, L1; 102, 257
 Liebert, J. 71, 163; 83, 184; 86, 139; 122, 297
 Lieske, J.H. 73, 282; 75, 158; 82, 340; 99, 402 (44, 209)
 Light, A. 78, 11
 Liller, W. 91, 331; 114, 213
 Lind, J. 90, 151
 Lindblad, P.O. 87, 245; 87, 254 (41, 85); 97, 56; 101, 377; 110, 336
 Lindegren, L. 89, 41; 96, 345; 101, 228; 110, 156
 Lindgren, B. 84, 300
 Lindgren, H. 92, 324 (42, 335); 128, 194
 Lindroos, K.P. 83, 263; 118, 210 (51, 143); 118, 210 (51, 161)
 Lingenfelter, R.E. 113, 9
 Link, H. 72, 92; 74, 15
 Linke, R.A. 88, L1
 Linnauto, S. 73, 364 (36, 33)
 Lipunov, V.M. 127, L1
 Liseau, R. 73, L4; 98, 341; 100, 334 (44, 451); 107, 354
 Liszt, H.S. 121, 163 (52, 63); 126, 341
 Li Ti Pei 100, L26; 103, 19; 116, 95
 Litman, M. 85, 197
 Little, L.T. 80, L1; 112, 49
 Liu, Y.-Z. 113, 192
 Livio, M. 105, 37; 109, 201; 112, 190; 116, 286; 121, L7; 125, L12
 Llebaria, A. 94, 12; 124, 236
 Llorente de Andrés, F. 72, 318; 79, L13; 80, 330 (38, 367); 85, 302; 91, 32; 91, 379 (42, 155); 98, 418; 100, 138; 107, 43; 111, 260
 Lloyd, C. 128, 394
 Locăns, V. 120, 185
 Lodén, K. 87, 254 (41, 85)
 Lodén, L.O. (36, 485); 73, 366 (36, 83); 80, 330 (38, 355); 88, 282 (41, 173); 91, 59; 98, 71; 99, 205 (44, 155); 124, 152 (53, 33)
 Lodenquai, J. 76, 212
 Loewenstein, R.F. 110, L18
 Lohsen, E.H.G. 99, 202 (44, 1)
 Loibl, B. 91, 265
 Loiseau, N. 108, 415 (48, 71)
 Lokner, V. 123, 249
 Lombard, J. 98, 81
 Longhitano, M. 78, 249 (38, 175)
 Lonngren, K.E. 81, 363
 Loore, C. de 86, 21
 Loose, H. 105, 342; 124, 89
 López, J.A. 107, 252
 Lopez Arroyo, M. 83, 163; 98, 418
 Lopez de Coca, P. 73, 365 (36, 61); 83, 114
 López-Puertas, M. 112, 229
 Lorenzi, L. 85, 267 (40, 271); 85, 342; 118, 209 (51, 77)
 Lorre, J.J. 120, 36
 Lortet, M.C. 71, 151; 84, 154; 90, 210; 120, 53; 128, 262 (54, 315)
 Losco, L. 84, 1
 Lotts, A.P. 126, 1
 Loucif, M.L. 112, 287
 Loughhead, R.E. 79, 128
 Louis, B. 121, 329 (52, 203); 128, 262 (54, 371)
 Louise, R. 94, 160; 98, 81; 98, 397; 102, 303; 107, 416 (47, 575); 114, 205
 Loulgerue, M. 118, 147
 Louth, H. 117, 149
 Lovas, F.J. 126, 393
 Lovy, D. 101, 419 (45, 97)
 Low, F.J. 76, 86

- Loyola, P. 121, 330 (52, 279)
 Lozinskaya, T.A. 71, 29; 84, 26
 Lub, J. 72, 82; 93, L5; 99, L1; 124, 294
 Lubenow, A.F. 120, 74
 Lucas, R. 84, 36; 88, L1; 97, 347; 101, L19; 106, 201
 Lucchin, F. 82, 287; 123, 118; 126, 377
 Lucke, P.B. 90, 350; 92, 182; 105, 318
 Luheshi, M. 75, 185; 86, 163
 Luiken, M. 76, 257 (37, 345); 76, 257 (37, 351)
 Luinge, W. 112, 178 (49, 427)
 Luminet, J.-P. 75, 228; 98, 412; 121, 97
 Lumme, K. 71, 123
 Lund, N. 102, L9
 Lundin, L. 106, 327
 Lundqvist, G. 96, 316
 Lundström, I. 72, 379 (35, 303)
 Lunel, M. 81, 387 (39, 7); 87, 139; 94, 350; 95, 395 (43, 257)
 Lustig, G. 73, 193; 106, 151; 125, 355
 Lynas-Gray, A.E. 100, 332 (44, 349); 106, 254
 Lynga, G. 109, 213
 Lyubarsky, Y.E. 123, 171
 Lyyra, M. 83, 238
- Ma, S.S. 97, 232
 Macau-Hercot, D. 71, 270 (35, 75); 85, 266 (40, 207)
 Maccacaro, T. 87, 252 (41, 21); 97, 94
 Macchetto, F. 79, L28; 79, 223; 103, 386; 106, 266
 Mac Connell, D.J. 80, 329 (38, 329); 100, 333 (44, 387); 110, 181 (48, 355)
 Maceroni, C. 73, 31; 76, 217; 102, 279 (45, 187); 102, 411; 106, 378 (47, 211); 109, 368; 111, 212 (49, 123); 119, 325 (51, 435); 124, 313; 128, 64
 Machado, L.E. 73, 370 (36, 313); 75, 260 (36, 407); 76, 368 (37, 467); 78, 251 (38, 275); 85, 266 (40, 251); 91, 262 (42, 81); 102, 279 (45, 183); 103, 210 (46, 131); 104, 169 (46, 171); 106, 180 (46, 371); 107, 413 (47, 463); 127, 424 (54, 47)
 Machado, M. 119, 233
 Machado, M.E. 108, 61
 Machalski, J. 89, 251 (41, 323); 95, 209 (43, 91); 99, 388
 Maciel, W.J. 88, 1; 98, 406; 99, 205 (44, 123); 106, 1
 MacKinnon, A.L. 119, 297; 123, 10
 MacLeod, J.M. 99, 36
 Macpherson, A.K. 98, 45
 MacQueen, R.M. 120, 136
 Macrae, J.H. 126, 1
 Macris, C.J. 78, 186
 Mader, G.L. 111, 212 (49, 137)
 Madore, B.F. 71, 359
 Madsen, C. 110, 198
- Maeder, A. 73, 82; 78, 305; 79, 158; 87, 254 (41, 111); 88, 135; 90, L17; 90, 311; 92, 101; 93, 136; 96, 1; 99, 97; 101, 385; 102, 401; 105, 149; 108, 148; 114, 409; 120, 113; 120, 130; 124, 84; 127, 238
 Magain, P. 122, 225; 127, L7
 Magazzù, A. 120, 139
 Maggi, G. 127, 169
 Magnan, C. 72, 18; 93, 150; 112, 287
 Magnenat, P. 77, 332; 96, 68; 108, 89
 Magni, G. 72, 134; 98, 173; 99, 255
 Magun, A. 92, 260
 Maihara, T. 72, 309; 97, 139
 Maillard, J.P. 127, 279; 128, 252
 Maitzen, H.M. 73, 222; 76, 257 (37, 345); 81, 323; 83, 328; 83, 334; 84, L9; 89, 230; 91, 261 (42, 9); 95, 213; 96, 151; 96, 174; 100, 3; 103, 210 (46, 151); 115, 275; 123, 48; 126, 80; 127, 244
 Maksym, P.A. 87, 213; 97, 218
 Malagnini, M.L. 92, 325 (42, 357); 114, 170; 125, 368; 128, 375
 Malaise, D. 114, 102
 Malakpour, I. 78, 7
 Malherbe, J.M. 102, 124; 119, 197; 123, 80; 127, 153
 Malin, D.F. 77, 371 (38, 39)
 Malin, S. 74, 294; 89, 70
 Malinie, G. 127, 164
 Malkamäki, L.J. 71, 198; 98, 15
 Mallinson, P.D. 74, 369
 Malmort, A.M. 82, 295; 102, 165
 Maluck, G. 104, 211
 Mammano, A. 79, 204; 79, 247; 85, 14; 88, 282 (41, 143); 94, 251; 95, 177; 100, 59; 100, 330; 119, 153; 123, 360 (52, 443); 124, 154 (53, 109)
 Manara, A. 72, 379 (35, 345); 91, 379 (42, 177); 99, 204 (44, 97); 104, 169 (46, 179); 108, 141; 112, 179 (49, 509); 114, 388; 124, 152 (53, 43)
 Manchanda, R.K. 108, 249; 117, 319; 127, 333
 Manchester, R.N. 128, 245
 Mancuso, S. 73, 31; 75, 261 (36, 415); 78, 250 (38, 187); 103, 57; 111, 212 (49, 129)
 Mandolesi, N. 121, 114
 Manduca, A. 75, 261 (36, 411)
 Mandwewala, N. 85, 311
 Manfroid, J. 92, 324 (42, 311); 99, 202 (44, 23); 119, 165 (51, 267); 120, 302
 Mangeney, A. 73, 292; 74, 9; 78, 36; 83, 26; 88, 277; 108, 161
 Mannervik, S. 106, 327
 Mannone, C. 103, 207 (49, 13)
 Mansfield, V.N. 74, 294; 89, 70
 Mantegazza, L. 75, 262 (36, 471); 78, 250 (38, 181); 104, 169 (46, 173); 111, 295; 112, 395 (49, 709); 118, 321; 126, 222 (53, 395); 126, 222 (53, 399)
 Mantovani, F. 75, 259 (36, 359); 95, 208 (43, 1); 97, 251; 101, 418 (45, 61); 105, 176; 105, 200; 110, 345; 118, 171; 123, 347
 Manzo, G. 87, 276; 90, 140; 122, 124
 Manzolini, F. 99, 203 (44, 55); 101, 420 (45, 145)
 Marano, B. 84, L4; 90, L10; 92, 325 (42, 357); 105, 200; 110, 183 (48, 453); 113, 15; 119, 163 (51, 179); 123, 359 (52, 411)
 Maraschi, L. 100, 68; 125, 117; 127, L17
 Maravalle, M. 124, 313
 Marcelin, M. 95, 59; 105, 76; 108, 134; 119, 166 (51, 353); 128, 140
 Marchal, C. 84, 1
 Marcout, J. 95, 395 (43, 265); 96, 158; 128, 262 (54, 315)
 Mardirossian, F. 72, 256; 73, 31; 73, 369 (36, 273); 76, 369 (37, 513); 79, 354; 80, 9; 81, 388 (39, 73); 82, 386; 82, 394 (39, 235); 82, 395 (39, 255); 82, 395 (39, 273); 83, 217; 84, 268 (40, 57); 85, 29; 85, 259; 86, 264; 91, 254; 91, 261 (42, 15); 94, 201; 94, 204; 94, 391; 95, 395 (32, 251); 96, 409; 96, 415; 97, 206; 97, 410; 99, 182; 101, 138; 101, 418 (45, 85); 102, 282 (45, 499); 103, 349; 109, 366; 111, 86; 111, 210 (49, 89); 114, 74; 118, 209 (51, 111); 119, 218; 121, 42; 122, 333; 125, 368; 125, 388; 126, 86; 128, 260 (54, 211)
 Marenbach, G. 108, 95
 Margon, B. 75, 260 (36, 371); 79, 360; 92, 212
 Margoni, R. 88, 282 (41, 143); 100, 59; 119, 153
 Margrave, T.E. 118, 209 (51, 71)
 Marilli, E. 73, 370 (36, 297); 91, 381 (42, 245); 106, 311; 115, 280; 117, 149; 121, 190
 Marino, B.F. 118, 325
 Mariotti, J.M. 120, 237
 Mariska, J.T. 73, 361
 Mark, J.W.-K. 77, 31; 88, 289
 Markkanen, T. 74, 201
 Marlière-Demuyne, C. 81, 1
 Marmolino, C. 83, 73; 100, 191; 127, 33
 Marsden, B.G. 114, 147
 Marsh, K.A. 94, 67
 Marshall, F.E. 76, L14
 Marsoglu, A. 112, 133
 Marten, A. 81, 152
 Martens, L. 95, 240; 106, 317; 125, 193
 Martens, P.C.H. 75, L7; 102, 156; 108, L1; 112, 366; 113, 324; 123, 216; 125, 69
 Martin, A.H.M. 91, 379 (42, 163)
 Martin, F. 79, 1

- Martin, N. 85, 305; 88, 283 (41, 219); 103, 83; 119, 165 (51, 277); 125, 176 (53, 255)
- Martin, P. 101, 265
- Martin, R.N. 74, L7; 98, L4; 104, 288; 113, 155; 115, 185; 124, 23; 124, 322
- Martin, W. 94, 365; 98, 328; 100, 331 (44, 325)
- Martinet, L. 75, 276; 77, 370; 87, L10; 96, 68; 127, 349
- Martinez, R.E. 91, 380 (42, 179)
- Martini, A. 82, 305
- Martin-Pintado, J. 107, L10; 110, 181 (48, 345); 117, 145; 119, 139; 121, 265
- Martres, M.-J. 79, 138
- Marxer, N. 116, 265
- Masereel, C. 105, 293
- Masiero, A. 94, L19
- Maslowski, J. 95, 285
- Masnou, J.-L. 80, 276; 90, 163; 91, L3; 93, 71; 94, 116; 105, 164; 128, 114; 128, 245
- Masnou-Seeuws, F. 81, 137
- Mason, D. 84, 167
- Mason, D.J. 92, 117
- Mason, H.E. 73, 74; 78, 342; 83, 380; 103, 324; 121, 163 (52, 115); 121, 164 (52, 181)
- Massaglia, S. 92, 246
- Massaguer, J.M. 87, 315
- Massaro, E. 71, 51; 90, 140
- Masson, C.R. 114, 270
- Materne, J. 74, 123; 74, 235; 86, 91; 91, 341; 102, 134; 109, 238; 111, 193; 113, 85; 124, L13
- Matese, J.J. 106, L9; 117, L7
- Mathez, G. 78, 252 (38, 295); 87, 132; 96, 235; 102, 1; 113, 336
- Mathis, J.S. 105, 372; 128, 212
- Mathys, G. 108, 213; 125, 13
- Matraka, B. 107, 283
- Matsumoto, T. 100, 116
- Mattes, H. 91, 36
- Matteson, J. 120, 150
- Matteucci, F. 105, 140; 110, 54; 123, 121
- Matthews, H.E. 71, 273 (35, 179); 72, 224; 73, 368 (36, 193); 75, 345; 87, 255; 88, 267; 88, 285; 91, 264 (42, 119); 94, 259; 95, 156; 95, 171; 101, L13; 103, 50; 126, 433; 127, 241; 127, 420; 128, 230
- Matthews, J.M. 82, 172
- Matthews, K. 105, 229
- Mattig, W. 75, 223; 83, 129; 93, 20; 96, 96; 97, 114; 102, 147; 123, 263; 123, 319
- Mattila, K. 71, 198; 78, 253; 78, 264; 78, 275; 81, 388 (39, 53); 82, 373; 97, 317
- Matveyenko, L.I. 78, 239; 79, 233
- Mätzler, C. 82, 93
- Maucherat-Joubert, M. 74, 218; 86, 299; 88, 323; 90, L13; 90, 73; 103, 305; 104, 177
- Mauder, H. 81, 368
- Mauersberger, R. 127, L19
- Maurice, E. 77, 269; 77, 277; 83, 383 (39, 325); 91, 53; 98, 9; 113, L15; 125, 176 (53, 255); 128, 384
- Mauron, N. 107, 415 (47, 547)
- Mavraganis, A. 80, 130
- Mavrides, S. 92, 128
- Mayer, C.J. 103, 393
- Mayer-Hasselwander, H.A. 90, 163; 91, L3; 93, 71; 105, 164; 107, 390; 115, 404; 125, 130
- Mayfield, E.B. 93, 228
- Mayor, M. 87, L1; 91, 112; 91, 115; 91, 276; 92, 1; 92, 182; 92, 325 (42, 383); 93, 235; 97, 4; 98, 1; 105, 318; 106, 221; 109, 258; 110, 241; 111, 224; 124, 256
- Mayr, H.G. 121, 124
- Maza, J. 111, 375
- Mazeh, T. 77, 145; 82, 260; 95, 3
- Mazodier, B. 115, 216 (50, 147)
- Mazure, A. 78, 252 (38, 295); 87, 132; 96, 235; 117, 17; 127, 263
- Mazurek, T.J. 81, 382; 90, 65
- Mazzitelli, I. 72, 134; 74, 161; 113, 303; 115, L1; 120, 164; 127, 149
- Mazzitelli, L. 79, 251
- Mazzoleni, F. 91, 379 (42, 177); 99, 204 (44, 97); 104, 169 (46, 179); 112, 179 (49, 509); 114, 388; 124, 152 (53, 43)
- Mazzoloni, F. 72, 379 (35, 345)
- Mazzuconi, F. 116, 188
- McBreen, B. 71, L19
- McCall, A. 91, 379 (42, 141)
- McCarroll, R. 78, 177; 106, 197
- McCarthy, D.D. 105, 359
- McCartney, D.J. 71, L22
- McClure, R.D. 88, 360
- McCluskey, G.E. Jr. 83, 363; 94, 285; 102, 282 (45, 473)
- McKeith, C.D. 71, L22; 81, 8; 84, 115; 90, 224
- McKenzie, J.F. 111, 317; 116, 191; 123, 111
- McLean, B.J. 123, 360 (52, 463); 128, 434
- McLeod, C.P. 91, L9
- McNamara, B.J. 97, 415 (43, 337); 118, 361; 128, 260 (54, 221)
- McQuoid, J.A. 71, L22
- Meaburn, J. 75, 127; 84, 167; 85, 128; 89, 126; 114, 367; 122, 111
- Meade, M.R. 106, 381 (47, 341)
- Mebold, U. 74, 100; 76, 230; 82, 272; 82, 275; 83, 384 (39, 337); 106, 180 (46, 389); 106, 190; 115, 223; 117, 172 (50, 451); 120, 63
- Meegan, C.A. 79, 88
- Megessier, C. 71, 295; 103, 244
- Mehlretter, J.P. 75, 223; 96, 96
- Meidav, M. 103, 367
- Meier, R.R. 79, 277; 81, 210; 91, 62; 97, 394; 104, 10
- Mein, N. 84, 96; 84, 99; 97, 310; 114, 192; 123, 89
- Mein, P. 84, 96; 102, 124; 111, 136; 115, 367; 119, 197; 123, 89; 127, 337
- Meire, R. 110, 152
- Meisels, A. 118, 21
- Meisenheimer, K. 118, 208 (51, 41)
- Melchior, P. 87, 365
- Melchiorri, F. 74, L20; 78, 376; 105, 184
- Melnick, J. 84, 317; 86, 304; 99, 204 (44, 87); 103, 386; 107, 23; 111, 375
- Melrose, D.B. 73, 151; 95, 86; 101, 284
- Mencaraglia, F. 74, L20
- Méndez, R.H. 91, 331; 99, L15; 101, 276; 101, 323; 116, L5
- Mendoza, E.V. 71, 147
- Menge de Freitas, S. 89, 253 (41, 433); 112, 395 (48, 687)
- Mennessier, M.O. 75, 276; 77, 370; 81, L13; 93, 325; 128, 69
- Menzies, J.W. 85, 119; 93, 219
- Mercier, C. 127, 132
- Merighi, R. 90, L10
- Merlin, Ph. 111, 151
- Mermilliod, J.-C. 73, 366 (36, 163); 93, 136; 97, 235; 100, 334 (44, 467); 109, 37; 109, 48; 128, 362
- Mermilliod, M. 84, 268 (40, 1)
- Mersch, G. 83, 287; 85, 93
- Messi, R. 85, L4; 96, 215
- Messina, A. 84, L4; 114, L1
- Mészáros, P. 77, 178
- Metlov, V.G. 91, 302
- Metz, K. 109, 171
- Metzinger, J. 123, 162
- Meurs, E.J.A. 96, 78; 101, 419 (45, 99); 115, 217 (50, 217)
- Mewe, R. 78, 104; 80, 1; 81, 185; 86, 268 (40, 323); 86, 268 (40, 335); 87, 55; 87, 261; 101, 417 (45, 11); 110, 180 (48, 305)
- Meyer, A. 78, 33
- Meyer, C. 111, 151; 121, 319
- Meyer, F. 76, 35; 78, 167; 104, L10; 106, 34; 121, 29; 128, 420
- Meyer, G. 95, 278; 107, 161; 107, 166
- Meyer-Hofmeister, E. 78, 167; 104, L10; 106, 34; 121, 29; 128, 420
- Meyer-Vernet, N. 84, 142; 94, L9; 96, 296; 97, 208; 105, 98; 119, 117
- Meylan, G. 90, 83; 104, 171 (46, 281); 107, 414 (47, 483); 108, 148; 110, 348; 124, 84
- Meyssonier, N. 119, 325 (51, 429)
- Mezaoui, A. 109, 23
- Mezger, P.G. 80, L3; 85, 26; 87, 269; 99, 400; 105, 372; 108, 227; 128, 212

- Mezzetti, M. 73, 31; 73, 369 (36, 273); 76, 369 (37, 513); 79, 354; 80, 9; 81, 388 (39, 73); 82, 386; 82, 394 (39, 235); 82, 395 (39, 255); 82, 395 (39, 265); 82, 395 (39, 273); 83, 217; 84, 268 (40, 57); 85, 29; 85, 259; 86, 264; 91, 261 (42, 15); 103, 349; 109, 366; 111, 86; 111, 210 (49, 89); 114, 74; 118, 209 (51, 111); 119, 218; 121, 42; 122, 333; 125, 368; 125, 388; 126, 86; 128, 260 (54, 211)
- Mianes, P. 119, 165 (51, 277)
- Micali, G. 103, 108
- Michaelidis, P. 91, 165
- Michalitsianos, A.G. 92, 320; 109, 136
- Michalke, R. 106, 379 (47, 221)
- Michalodimitrakis, M. 76, 6; 81, 30; 81, 113; 90, 102; 90, 324; 93, 204; 93, 212; 122, 231
- Michard, R. 74, 206; 78, 122; 78, 251 (38, 245); 79, 337; 91, 122; 112, 180 (49, 591); 121, 313
- Michaud, G. 76, 287; 103, 244
- Michet, D. 102, L17
- Middelkoop, F. 96, 401; 101, 26; 101, 295; 107, 31; 110, 30; 113, 1
- Mignard, F. 96, L1; 111, 211 (49, 105); 111, 211 (49, 107); 126, 221 (53, 361)
- Mihalas, D. 97, 43
- Mikkola, S. 94, 20
- Milani, A. 117, 3
- Milano, L. 73, 369 (36, 273); 75, 261 (36, 415); 78, 250 (38, 187); 88, 282 (41, 143); 96, 328; 100, 59; 101, 273; 102, 279 (45, 187); 103, 57; 106, 378 (47, 211); 109, 368; 111, 212 (49, 123); 111, 212 (49, 129); 119, 325 (51, 435); 121, 331 (52, 311); 123, 326
- Miley, G.K. 71, 272 (35, 153); 76, 65; 76, 106; 76, 109; 76, 258 (37, 397); 77, 1; 79, 360; 80, 13; 80, 201; 90, L7; 105, 278; 106, 163; 120, 297; 122, 330
- Milgrom, M. 76, L3; 76, 338; 78, L17; 78, L9; 87, L15; 100, 271
- Miller, G.E. 82, 152
- Miller, H.R. 72, 380 (35, 387); 121, 331 (52, 289)
- Millet, J.M. 92, 6; 95, 295; 109, 228; 115, 8; 123, 73
- Milliard, B. 88, 52; 95, 59; 97, L7
- Milne, D.K. 73, 368 (36, 169); 73, 369 (36, 227); 81, 293; 81, 302; 115, 217 (50, 209)
- Minn, Y.K. 77, 37; 78, 100; 103, 269
- Mirabel, I.F. 77, 110
- Mitalas, R. 108, 55
- Miyamoto, M. 90, 215; 115, 216 (50, 173)
- Mochkovitch, R. 122, 212
- Moffat, A.F.J. 72, 332; 76, 257 (37, 345); 77, 128; 78, 250 (38, 197); 85, 201; 86, 87; 88, 283 (41, 211); 91, 147; 96, 133; 108, 326; 110, 263; 114, 135; 120, 278; 124, 273; 125, 83; 126, 183
- Moity, J. 121, 163 (52, 37)
- Molaro, P. 119, 160; 121, 164 (52, 135); 127, L3; 128, 429
- Moles, M. 100, 258
- Möllenhoff, C. 77, 141; 81, 54; 93, 248; 94, 333; 99, 341; 108, 130
- Molteni, D. 87, 88; 102, 283; 111, 365
- Mon, M. 121, 174
- Monnet, G. 72, 12; 72, 73; 97, 342; 102, 119; 102, 175; 104, 15; 106, 16; 115, 61; 128, 405
- Monsignori Fossi, B.C. 72, 171; 102, 391
- Moorwood, A.F.M. 81, 152; 82, 86; 90, 304; 94, 299; 100, L16; 102, 197; 107, 276; 115, 84; 125, 342
- Moraal, H. 125, 204
- Morales, C. 85, 302; 91, 379 (42, 155); 98, 418; 100, 138
- Morales Durán, C. 72, 318; 108, 416 (48, 139)
- Moran, J.M. 78, 239; 79, 233
- Morando, B. 76, L9; 128, 124
- Morbidelli, R. 118, 208 (51, 63)
- Morel, P. 101, 259
- Morel, P.J. 90, 327; 103, 207 (46, 3); 104, 47; 105, 323; 106, 378 (47, 217); 107, 406; 127, 423 (54, 39)
- Moreno, V. 111, 260
- Moreno-Insertis, F. 122, 241
- Morfill, G.E. 85, 316; 87, 85; 90, 134
- Morgan, D.H. 84, 377
- Morgan, J.G. 73, 121; 79, 260; 79, 260; 79, 269
- Morguleff, N. 103, 210 (46, 151)
- Moricet, P. 126, 293
- Morini, M. 104, 75
- Morossi, C. 72, 256; 89, 251 (41, 299); 90, 146; 106, 332; 114, 170; 119, 160; 127, L3; 128, 375
- Morras, R. 87, 253 (41, 67); 87, 254 (41, 121); 92, 315; 115, 249; 118, 210 (51, 131)
- Morris, D. 73, 46; 83, 297; 84, 260; 93, 54; 100, 107; 106, 180 (46, 421)
- Morris, M. 99, 239; 111, 239; 121, 15
- Morton, D.C. 71, 141
- Morton, J.C. 123, 360 (52, 463)
- Moss, D. 78, 119; 85, 135; 91, 319; 119, 47
- Motch, Ch. 71, L17; 75, 258; 100, L1; 100, 277; 101, L9; 103, 428; 109, L1; 110, 316; 111, L9; 112, 355; 114, L7; 119, 171
- Mouchet, M. 90, 113; 101, 184; 102, 31; 106, 339; 112, 355; 125, 378
- Mountfort, P.I. 92, 156
- Mouradian, Z. 79, 138; 89, L8; 101, 292
- Mross, R. 95, 209 (43, 75)
- Mukai, T. 95, 373; 99, 1; 107, 97
- Mulder, P.S. 127, 297
- Mulder, W.A. 117, 9; 121, 91
- Mullan, D.J. 108, 251; 108, 279
- Muller, A.B. 103, 208 (46, 57)
- Müller, E. 80, 147; 81, 288; 82, 288; 103, 147; 103, 358; 114, 53
- Müller, E.A. 80, 330 (38, 367); 83, 199; 87, L3; 91, 32
- Münch, G. 81, 189; 95, 100; 99, 248; 117, 127
- Mundt, R. 73, 365 (36, 57); 74, 21; 75, L14; 78, 181; 90, 184; 93, 412; 95, 234; 107, 412 (47, 419); 112, 174
- Munier, A. 78, 65; 94, 373
- Muñoz, F. 98, 418
- Muracchini, A. 86, 36
- Murakami, H. 100, 116
- Muratorio, G. 85, 233; 95, 191; 95, 210 (43, 111); 126, 427
- Murdin, P. 87, 292; 87, 299
- Murray, C.A. 76, 257 (37, 333)
- Mushotzky, R.F. 79, 56
- Musielak, Z. 105, 23
- Musielok, J. 77, 373 (38, 119)
- Mussil, C. 123, 343
- Mutel, R.L. 106, 21
- Muthsam, H. 71, 271 (35, 107); 71, 274 (35, 253); 73, 159; 83, 334; 86, 240; 92, 171; 100, 159
- Muxlow, T. 116, 60
- Muzzio, J.C. 91, 380 (42, 179)
- Myrabø, H.K. 84, 297
- Nadal, R. 71, 273 (35, 203); 74, 113; 81, 333; 115, 23; 121, 331 (52, 293); 127, 425 (54, 187)
- Nagata, T. 119, L1
- Nagel, W. 118, 66; 126, 251
- Nakagawa, N. 122, 171
- Nakagawa, Y. 72, 67
- Nakai, N. 124, 152 (53, 57)
- Namba, O. 117, 277
- Nandy, K. 84, 377
- Nanni, D. 77, 45; 95, 188
- Nanni, M. 100, 323; 105, 176; 119, 165 (51, 321)
- Naranan, S. 89, 249; 113, 167; 117, 319; 120, 326
- Narayan, R. 93, 269; 113, L3; 118, 194; 122, 45
- Narlikar, J.V. 92, 26; 118, 154
- Nascimento, J.O. 123, 358 (52, 373)
- Nasi, E. 74, 62; 75, 261 (36, 429)
- Natale, V. 74, L20; 105, 184; 122, 151; 128, 438
- Natali, G. 85, L4; 96, 215
- Natta, A. 84, 284; 91, 378; 99, 289
- Nauber, U. 102, 280 (45, 367)
- Navas, F.J. 88, 283 (41, 215)
- Neckel, Th. 83, 384 (39, 411); 91, 186; 91, 381 (42, 251); 92, L9; 95, 206; 102, 171; 102, 281 (45, 451)
- Needham, J.D. 83, 370
- Neff, J.S. 75, 193

- Neff, S.G. 128, 318
 Neidhöfer, J. 83, 297; 86, 268 (40, 319); 95, 208 (43, 19)
 Neizvestny, S.I. 85, L19
 Nelles, B. 75, 261 (36, 457); 80, 248; 119, 75; 125, 175 (53, 215); 125, 359
 Neo, S. 77, 210
 Nepveu, M. 75, 149; 79, 40; 81, 78; 84, 14; 98, 65; 101, 362; 105, 15; 112, 223; 113, 277; 114, 337; 118, 267; 125, 375
 Nesci, R. 99, 120; 121, 226; 121, 325
 Nesis, A. 95, 221; 96, 96; 111, 272; 123, 319
 Netto, E.R. 75, 260 (36, 407); 85, 266 (40, 251); 91, 262 (42, 81); 103, 210 (46, 131); 104, 169 (46, 171); 106, 180 (46, 371); 107, 413 (47, 463); 127, 424 (54, 47)
 Neugebauer, G. 105, 229
 Neupert, W.M. 128, 181
 Neutsch, W. 72, 339; 102, 59; 118, 57
 Neven, L. 90, 170
 Newhall, X.X. 125, 150
 Newkirk, G., Jr. 113, 129
 Newman, W.I. 73, 37
 Nguyen Huu-Doan 126, 222 (53, 407)
 Nguyen-Q-Rieu 75, 351; 81, 1; 84, 311; 85, L1; 90, 88; 91, 283; 97, 1; 97, 317; 102, 65; 107, 128; 107, 229; 117, 314
 Nguyen-Trong, T. 77, 257; 101, 187; 117, 272
 Niarchos, P.G. 124, 151 (53, 13)
 Nicholson, D.R. 91, 7; 91, 17
 Nicholson, W. 76, 257 (37, 333)
 Nicolet, B. 92, 323 (42, 283); 97, 85; 104, 185; 106, 378 (47, 199); 110, 183 (48, 485); 117, 248; 119, 164 (51, 245)
 Nicoll, J.F. 82, L3; 115, 398; 118, 180
 Nicollier, C. 83, 22; 83, 140
 Nicolov, A. 126, 352
 Nicolson, G.D. 87, 292
 Niel, M. 79, L24; 100, L1; 103, 428; 109, L9; 126, 400
 Niemela, V.S. 90, 210; 108, 326; 116, L5; 126, 183
 Niemi, A. 80, 174; 104, 276
 Nieto, J.L. 74, 152; 93, 53; 107, 415 (47, 535); 108, 334; 109, 95; 112, 321; 117, 172 (50, 491); 125, 176 (53, 247); 126, 221 (53, 383)
 Nieuwenhuijzen, H. 81, 223; 102, 257
 Nikolaev, N.Ya. 93, 85; 109, 340
 Nikolov, A. 115, 218 (50, 261)
 Nikolsky, G.M. 114, 347
 Nishimura, T. 127, 383
 Niss, B. 98, 415
 Nissen, P.E. 97, 145; 128, 194
 Nitsch, J. 74, 263
 Nittmann, J. 97, 325
 Nityananda, R. 93, 269; 118, 194
 Nobili, A.M. 117, 3
 Noble, S. McC. 71, L22
 Noël, F. 73, 370 (36, 307); 81, 389 (39, 89); 91, 380 (42, 193); 107, 413 (47, 481); 119, 164 (51, 219)
 Noëns, J.-C. 120, L1
 Noels, A. 85, 20; 92, 242; 94, L1; 99, 39; 101, 215; 103, 390; 105, 293; 108, 49; 110, 50; 113, 219; 119, 253; 123, 283
 Nollez, G. 127, 263
 Nomoto, K. 77, 210
 Noordam, J.E. 81, 223
 Noorgaard, H. 74, 353
 Nordh, H.L. 91, L1; 94, 377; 115, 308
 Nordh, L. 75, L1
 Nordling, C. 106, 327
 Nordlund, Å. 96, 345; 107, 1
 Nordström, B. 82, 225; 83, 339; 95, 210 (43, 141); 101, 7; 112, 180 (49, 571); 121, 271; 121, 332 (52, 323); 122, 23; 123, 360 (52, 471); 123, 360 (52, 479); 125, 177 (53, 287); 127, 425 (54, 149); 127, 425 (54, 161); 128, 17; 128, 261 (54, 301)
 Norman, C.A. 76, 75; 77, 66; 77, 261; 79, L26; 81, 282; 89, 353; 90, L7; 97, 413; 122, 330; 124, L1
 Norman, M.L. 113, 285
 Norris, R.P. 124, L4
 North, P. 82, 230; 89, 252 (41, 395); 97, 359; 97, 416 (43, 395); 108, 373; 114, 23
 Nottale, L. 95, 210 (43, 121); 100, 258; 110, 9; 113, 223; 113, 336; 114, 261; 118, 85
 Novikov, A.Yu. 109, 340
 Novikov, I.D. 80, 104
 Nowakowski, L.A. 116, 158; 118, 29; 127, 259
 Nørgaard-Nielsen, H.U. 93, 290; 117, 257; 122, 301
 Nunes, M. 101, 418 (45, 79)
 Núñez, J. 110, 23; 110, 95
 Nussbaumer, H. 71, L5; 72, L1; 72, 129; 74, 244; 75, L17; 78, 33; 89, 308; 96, 91; 99, 177; 101, 118; 102, 351; 106, 379 (47, 257); 109, 271; 110, L1; 110, 295; 113, 21; 115, 205; 116, 265; 124, 279; 126, 59; 126, 75
 Nyman, L.-Å. 120, 307
 Ober, W.W. 119, 54; 119, 61
 Oberlerchner, D. 106, 379 (47, 221)
 Oberto, Y. 107, 416 (47, 595)
 Oblak, E. 88, 284 (41, 255); 102, 281 (45, 459); 115, 216 (50, 147); 123, 238
 O'Brien, A. 91, 331
 O'Brien, G.T. 128, 110
 Occhionero, F. 72, 204; 86, 212; 97, 169; 99, L12; 107, 172; 117, 365; 123, 118; 126, 403
 Ochsenbein, F. 86, 321; 95, 395 (43, 259); 95, 395 (43, 265); 99, 401 (44, 179); 107, 414 (47, 523); 118, 197; 128, 262 (54, 315)
 Oda, N. 72, 309; 97, 139; 128, 207
 Oda, T. 99, 195
 O'Dell, S.L. 76, 254
 Oegerle, W.R. 92, 212
 Ögelman, H. 123, 17
 Ohashi, M. 90, 215
 Oja, T. 103, 339; 121, 164 (52, 131)
 Okeke, P.N. 81, 263
 Okuda, H. 72, 309; 97, 139
 Olander, N. 95, 395 (43, 267)
 Olano, C.A. 94, 151; 95, 316; 103, 208 (46, 41); 112, 195
 Olmsted, E. 125, 23
 Olnon, F.M. 91, 264 (42, 119); 128, 230
 Olofsson, G. 84, 300; 120, 1
 Olofsson, H. 99, 80; 100, L30; 107, 128; 113, L18
 Olori, M.C. 97, 251; 100, 323
 Olsen, E.H. 76, 257 (37, 367); 82, 394 (39, 205); 110, 179 (48, 165); 110, 215; 127, 424 (54, 55)
 Olson, G.L. 81, 228; 121, 286
 Olthof, H. 72, 241
 Omont, A. 77, 373 (38, 101); 81, 1; 84, 311; 97, 347; 106, 201
 Ondrechen, M.P. 126, 341
 O'Neill, J.A. 81, 100; 81, 108
 Oneto, J.L. 103, 28
 Onnembo, A. 97, 104; 99, 66
 Oort, J.H. 78, 312; 94, 359; 95, 7; 101, 305
 Oort, M.J.A. 102, 347
 Opher, R. 71, 332; 79, 27; 87, 58; 98, 39; 100, L10; 108, 1; 109, 191; 125, L9
 Oppenheimer, M. 75, 137
 Oranje, B.J. 109, 32; 110, 30; 122, 88; 124, 43
 Orford, K.J. 126, 1
 Orsal, E. 120, 150
 Ortlieb, N. 94, 280
 Ortolani, S. 83, L8; 87, 31; 88, L16; 116, 43; 123, 147; 123, 359 (52, 399)
 Osaki, Y. 84, 304
 Osborne, J.L. 82, 110; 98, 286; 103, 405
 Oster, L. 73, L21
 Östreicher, R. 114, 328; 118, 75
 Ostriker, J.P. 81, L7; 97, 403; 102, 142
 Ott, H.-A. 85, 365
 Otzen Petersen, J. 84, 356
 Ounnas, C. 112, 396 (49, 715)
 Owen, J.R. 92, 26
 Owen, T. 73, L7
 Oxenius, J. 76, 312; 97, 43; 127, 224
 Özel, M.E. 81, 33; 118, 114; 125, 130; 128, 245
 Ozernoy, L.M. 79, 35; 86, 315; 95, 39; 98, 50; 98, 57; 111, 1; 111, 16
 Pacini, F. 88, 367; 101, 159; 126, L11; 126, 7
 Packet, W. 75, 255; 82, 73; 95, 202; 102, 17

- Packett, W. 80, 242
 Paczynsky, B. 82, 349; 88, 23
 Padrielli, L. 71, 272 (35, 169); 73, 40; 75, 259 (36, 359); 84, 269 (40, 91); 101, 418 (45, 61); 105, 200; 106, 181 (46, 473); 118, 171; 119, 163 (51, 179); 123, 359 (52, 411)
 Paerels, F.B.S. 87, 68; 90, 204
 Page, A.A. 118, 325
 Page, C.G. 119, 171
 Pagel, B.E.J. 101, 377
 Pakull, M. 93, L5; 102, L1; 122, 79; 124, 294
 Pakull, M.W. 101, L9; 104, 33
 Palacios, J.A. 98, 382
 Palagi, F. 87, 254 (41, 129); 111, 211 (49, 101); 125, 1
 Palla, F. 99, 289
 Pallavicini, R. 98, 316
 Palmer, P. 102, L13
 Palous, J. 87, 361
 Palumbo, G.G.C. 126, 221 (53, 373)
 Panagia, N. 75, 303; 81, 375; 82, 389; 85, 332; 90, 269; 96, 306; 98, 295; 99, 289; 102, 424; 105, 372; 106, 266; 107, 145; 107, 354; 111, 130; 123, 347; 128, 212
 Panek, R.J. 90, 341
 Pankonin, V. 75, 34; 75, 365; 80, L3; 87, 269; 89, 173; 99, 270; 99, 400; 110, 181 (48, 345)
 Pannunzio, R. 83, 385 (39, 423); 89, 251 (41, 319); 106, 181 (47, 159); 107, 362; 118, 208 (51, 63)
 Paolicchi, P. 104, 159; 124, 313
 Papadopoulos, K. 112, 377
 Papayannopoulos, T. 77, 75; 79, 197; 92, 33; 119, 21
 Papoular, R. 104, L1; 117, 46; 128, 335
 Paradijs, J. van 75, 112; 87, 210
 Paredes, J.M. 124, 309
 Paresce, F. 75, 260 (36, 371); 83, 58; 96, 23; 124, 300
 Parisot, J.P. 115, 216 (50, 147)
 Parma, P. 94, 61; 96, 412; 101, 194; 110, 169; 114, 400; 115, 423; 119, 163 (51, 179); 122, 305; 123, 359 (52, 411); 126, 311; 126, 412
 Parmar, A. 102, L1
 Parmeggiani, G. 124, 155 (53, 139)
 Parra, F. 88, 283 (41, 215)
 Parsignault, D. 81, 185
 Pasinetti, L.E. 99, 203 (44, 55); 99, 397; 101, 420 (45, 145); 107, 326
 Pasternak, M. 87, 328
 Paternò, L. 79, 184; 86, 40; 88, 240; 91, 328; 91, 356; 96, 369; 105, 133
 Paterson-Beeckmans, F. 121, 174
 Patnaik, A.R. 123, 107
 Patriarchi, P. 87, 254 (41, 129)
 Paturel, G. 71, 19; 71, 106; 86, 269 (40, 355); 88, 32; 91, 262 (42, 69); 99, 402 (44, 217); 102, 119; 106, 182 (47, 171); 107, 413 (47, 467); 113, 61; 114, 421 (50, 101); 118, 4; 126, 221 (53, 351)
 Paul, J. 90, L13
 Paul, J.A. 75, 340; 91, L3; 93, 71; 107, 390; 115, 404; 128, 245
 Pauliny-Toth, I.I.K. 77, 1; 79, 268; 81, 235; 85, 329; 88, L12; 91, 259; 95, 285; 95, 393 (43, 195); 97, L1; 100, 7; 101, 49; 102, 280 (45, 367); 108, 157
 Pauls, R. 92, 200
 Pauls, T. 71, 270 (35, 23); 73, L10; 73, 253; 82, 388; 84, 237; 85, 26; 91, L11; 91, 36; 92, 47; 92, 57; 97, 296; 98, L4; 103, 197; 103, 277; 112, 120; 127, 388
 Pauls, T.A. 77, L3; 104, 288; 110, L20; 115, 185; 124, 23; 124, 322
 Pauls, U. 126, 320
 Paulus, G. 116, 183
 Pauzat, F. 100, L14
 Pavlovski, K. 76, 362; 123, 326
 Pawlowicz, L.M. 86, 68
 Payne, H.E. 75, 365
 Peacock, A. 87, 276; 122, 124
 Pecker, J.C. 89, L8
 Pedersen, H. 72, 379 (35, 313); 94, L29; 110, 316; 121, L11; 122, 301
 Pedlar, A. 94, 238
 Pédoussaut, A. 71, 273 (35, 203); 74, 113; 81, 333; 107, 215; 115, 23; 121, 331 (52, 293); 127, 425 (54, 187)
 Pégourié, B. 128, 335
 Peimbert, M. 80, 155; 104, 72
 Pel, J.W. 72, 82; 99, L1; 124, 294
 Pelat, D. 81, 172; 95, 18; 95, 394 (43, 231); 105, 335
 Pelikhov, N.V. 98, 57
 Pellat, R. 109, 228; 115, 8
 Pellet, A. 72, 12; 106, 214
 Peña, J.H. 118, 209 (51, 71); 124, 153 (53, 81)
 Pence, W.D. 112, 394 (49, 631)
 Pendrel, J.V. 112, 181
 Peng, Q.-H. 113, 9; 117, 205
 Peniche, R. 118, 209 (51, 71); 124, 153 (53, 81)
 Penna, J.L. 110, 183 (48, 485); 123, 358 (52, 373)
 Penston, M. 74, L18; 79, 223
 Péquignot, D. 78, 29; 81, 121; 81, 356; 83, 52; 120, 249; 127, 42
 Peraiah, A. 71, 289
 Peralta, J.O. 74, 121
 Peralta, M.T. 74, 121
 Perault, M. 85, 244; 103, 63; 104, 101
 Percival, J. 75, 268
 Percy, J.R. 82, 172
 Perdang, J. 102, 109; 112, 35; 122, 39; 125, 6
 Perdang, P. 79, 261
 Pérez Garde, M. 93, 67
 Pérez Mollá, J. 91, 379 (42, 155); 100, 138
 Perie, M. 107, 413 (47, 467)
 Perinotto, M. 76, 69; 81, 215; 85, 332; 95, 127; 100, 241; 101, 88; 101, 247; 108, 314; 111, 130
 Perola, C. 97, 94
 Perola, G.C. 73, 54; 84, 228; 84, 245; 103, 35
 Perotti, F. 117, 38
 Perrier, C. 90, 207; 117, 199
 Perrin, M.-N. 94, 207; 128, 347
 Perry, C.L. 102, 281 (45, 439)
 Perry, J.J. 82, 99
 Perryman, M.A.C. 122, 17
 Persi, P. 76, 217; 90, 290; 92, 238; 111, L7; 112, 292; 127, 49
 Petelski, E.F. 87, 20
 Peters, B. 102, L9
 Peters, C.F. 104, 37
 Petersen, J.O. 80, 53; 96, 146; 117, 352; 121, 241
 Peterson, B.A. 76, 230
 Peterson, B.M. 93, 382
 Peterson, D.W. 92, 214
 Petford, A.D. 82, 249
 Peton, A. 101, 96; 114, 1
 Peton-Jonas, D. 102, 280 (45, 193)
 Petrini, D. 96, 380; 99, 401 (44, 171); 111, 279
 Petrou, M. 119, 21
 Petrou, N. 102, L9
 Pettersen, B.R. 82, 53; 95, 135; 97, 199; 99, 401 (44, 179); 118, 75; 120, 192; 123, 184
 Petterson, B.R. 80, 265
 Petterson, J.A. 81, L7
 Pettersson, B. 107, 414 (47, 533)
 Pettini, M. 102, 351
 Peyrin, Y. 119, 165 (51, 277)
 Pfenniger, D. 127, 349
 Pflleiderer, J. 86, 268 (40, 351); 101, 320; 102, L21; 103, 220
 Pham Van, J. 77, 370; 111, 211 (49, 105); 111, 211 (49, 107); 126, 221 (53, 361)
 Philip, A.G.D. 123, 39
 Phillips, S. 98, 286; 103, 405
 Phillips, A.P. 85, 272
 Phillips, J.P. 71, 115; 79, 31; 83, 370; 116, 130; 116, 293; 117, 33
 Phillips, M.M. 76, L14
 Phillips, R.B. 106, 21
 Phillips, T.G. 73, 14; 82, 381
 Picat, J.P. 75, 176; 88, 97; 90, 344; 113, L1; 121, L4
 Picchio, G. 94, 52; 99, 31; 111, 326
 Piccioni, A. 86, 267 (40, 289); 95, 177; 100, 330; 117, 149; 118, 365; 124, 155 (53, 139)
 Pick, M. 79, 164; 87, 63; 108, 161; 111, 306
 Pickup, D.A. 127, 417
 Pietsch, W. 94, 234; 107, 350
 Pigatto, L. 102, 109

- Neff, S.G. 128, 318
 Neidhöfer, J. 83, 297; 86, 268 (40, 319); 95, 208 (43, 19)
 Neizvestny, S.I. 85, L19
 Nelles, B. 75, 261 (36, 457); 80, 248; 119, 75; 125, 175 (53, 215); 125, 359
 Neo, S. 77, 210
 Nepveu, M. 75, 149; 79, 40; 81, 78; 84, 14; 98, 65; 101, 362; 105, 15; 112, 223; 113, 277; 114, 337; 118, 267; 125, 375
 Nesci, R. 99, 120; 121, 226; 121, 325
 Nesis, A. 95, 221; 96, 96; 111, 272; 123, 319
 Netto, E.R. 75, 260 (36, 407); 85, 266 (40, 251); 91, 262 (42, 81); 103, 210 (46, 131); 104, 169 (46, 171); 106, 180 (46, 371); 107, 413 (47, 463); 127, 424 (54, 47)
 Neugebauer, G. 105, 229
 Neupert, W.M. 128, 181
 Neutsch, W. 72, 339; 102, 59; 118, 57
 Neven, L. 90, 170
 Newhall, X.X. 125, 150
 Newkirk, G., Jr. 113, 129
 Newman, W.I. 73, 37
 Nguyen Huu-Doan 126, 222 (53, 407)
 Nguyen-Q-Rieu 75, 351; 81, 1; 84, 311; 85, L1; 90, 88; 91, 283; 97, 1; 97, 317; 102, 65; 107, 128; 107, 229; 117, 314
 Nguyen-Trong, T. 77, 257; 101, 187; 117, 272
 Niarchos, P.G. 124, 151 (53, 13)
 Nicholson, D.R. 91, 7; 91, 17
 Nicholson, W. 76, 257 (37, 333)
 Nicolet, B. 92, 323 (42, 283); 97, 85; 104, 185; 106, 378 (47, 199); 110, 183 (48, 485); 117, 248; 119, 164 (51, 245)
 Nicoll, J.F. 82, L3; 115, 398; 118, 180
 Nicollier, C. 83, 22; 83, 140
 Nicolov, A. 126, 352
 Nicolson, G.D. 87, 292
 Niel, M. 79, L24; 100, L1; 103, 428; 109, L9; 126, 400
 Niemela, V.S. 90, 210; 108, 326; 116, L5; 126, 183
 Niemi, A. 80, 174; 104, 276
 Nieto, J.L. 74, 152; 93, 53; 107, 415 (47, 535); 108, 334; 109, 95; 112, 321; 117, 172 (50, 491); 125, 176 (53, 247); 126, 221 (53, 383)
 Nieuwenhuijzen, H. 81, 223; 102, 257
 Nikolaev, N.Ya. 93, 85; 109, 340
 Nikolov, A. 115, 218 (50, 261)
 Nikolsky, G.M. 114, 347
 Nishimura, T. 127, 383
 Niss, B. 98, 415
 Nissen, P.E. 97, 145; 128, 194
 Nitsch, J. 74, 263
 Nittmann, J. 97, 325
 Nityananda, R. 93, 269; 118, 194
 Nobili, A.M. 117, 3
 Noble, S. McC. 71, L22
 Noël, F. 73, 370 (36, 307); 81, 389 (39, 89); 91, 380 (42, 193); 107, 413 (47, 481); 119, 164 (51, 219)
 Noëns, J.-C. 120, L1
 Noels, A. 85, 20; 92, 242; 94, L1; 99, 39; 101, 215; 103, 390; 105, 293; 108, 49; 110, 50; 113, 219; 119, 253; 123, 283
 Nollez, G. 127, 263
 Nomoto, K. 77, 210
 Noordam, J.E. 81, 223
 Noorgaard, H. 74, 353
 Nordh, H.L. 91, L1; 94, 377; 115, 308
 Nordh, L. 75, L1
 Nordling, C. 106, 327
 Nordlund, Å. 96, 345; 107, 1
 Nordström, B. 82, 225; 83, 339; 95, 210 (43, 141); 101, 7; 112, 180 (49, 571); 121, 271; 121, 332 (52, 323); 122, 23; 123, 360 (52, 471); 123, 360 (52, 479); 125, 177 (53, 287); 127, 425 (54, 149); 127, 425 (54, 161); 128, 17; 128, 261 (54, 301)
 Norman, C.A. 76, 75; 77, 66; 77, 261; 79, L26; 81, 282; 89, 353; 90, L7; 97, 413; 122, 330; 124, L1
 Norman, M.L. 113, 285
 Norris, R.P. 124, L4
 North, P. 82, 230; 89, 252 (41, 395); 97, 359; 97, 416 (43, 395); 108, 373; 114, 23
 Nottale, L. 95, 210 (43, 121); 100, 258; 110, 9; 113, 223; 113, 336; 114, 261; 118, 85
 Novikov, A.Yu. 109, 340
 Novikov, I.D. 80, 104
 Nowakowski, L.A. 116, 158; 118, 29; 127, 259
 Nørgaard-Nielsen, H.U. 93, 290; 117, 257; 122, 301
 Nunes, M. 101, 418 (45, 79)
 Núñez, J. 110, 23; 110, 95
 Nussbaumer, H. 71, L5; 72, L1; 72, 129; 74, 244; 75, L17; 78, 33; 89, 308; 96, 91; 99, 177; 101, 118; 102, 351; 106, 379 (47, 257); 109, 271; 110, L1; 110, 295; 113, 21; 115, 205; 116, 265; 124, 279; 126, 59; 126, 75
 Nyman, L.-Å. 120, 307
 Ober, W.W. 119, 54; 119, 61
 Oberlerchner, D. 106, 379 (47, 221)
 Oberto, Y. 107, 416 (47, 595)
 Oblak, E. 88, 284 (41, 255); 102, 281 (45, 459); 115, 216 (50, 147); 123, 238
 O'Brien, A. 91, 331
 O'Brien, G.T. 128, 110
 Occhionero, F. 72, 204; 86, 212; 97, 169; 99, L12; 107, 172; 117, 365; 123, 118; 126, 403
 Ochsenbein, F. 86, 321; 95, 395 (43, 259); 95, 395 (43, 265); 99, 401 (44, 179); 107, 414 (47, 523); 118, 197; 128, 262 (54, 315)
 Oda, N. 72, 309; 97, 139; 128, 207
 Oda, T. 99, 195
 O'Dell, S.L. 76, 254
 Oegerle, W.R. 92, 212
 Ögelman, H. 123, 17
 Ohashi, M. 90, 215
 Oja, T. 103, 339; 121, 164 (52, 131)
 Okeke, P.N. 81, 263
 Okuda, H. 72, 309; 97, 139
 Olander, N. 95, 395 (43, 267)
 Olano, C.A. 94, 151; 95, 316; 103, 208 (46, 41); 112, 195
 Olmsted, E. 125, 23
 Olnon, F.M. 91, 264 (42, 119); 128, 230
 Olofsson, G. 84, 300; 120, 1
 Olofsson, H. 99, 80; 100, L30; 107, 128; 113, L18
 Olori, M.C. 97, 251; 100, 323
 Olsen, E.H. 76, 257 (37, 367); 82, 394 (39, 205); 110, 179 (48, 165); 110, 215; 127, 424 (54, 55)
 Olson, G.L. 81, 228; 121, 286
 Olthof, H. 72, 241
 Omont, A. 77, 373 (38, 101); 81, 1; 84, 311; 97, 347; 106, 201
 Ondrechen, M.P. 126, 341
 O'Neill, J.A. 81, 100; 81, 108
 Oneto, J.L. 103, 28
 Onnembo, A. 97, 104; 99, 66
 Oort, J.H. 78, 312; 94, 359; 95, 7; 101, 305
 Oort, M.J.A. 102, 347
 Opher, R. 71, 332; 79, 27; 87, 58; 98, 39; 100, L10; 108, 1; 109, 191; 125, L9
 Oppenheimer, M. 75, 137
 Oranje, B.J. 109, 32; 110, 30; 122, 88; 124, 43
 Orford, K.J. 126, 1
 Orsal, E. 120, 150
 Ortlieb, N. 94, 280
 Ortolani, S. 83, L8; 87, 31; 88, L16; 116, 43; 123, 147; 123, 359 (52, 399)
 Osaki, Y. 84, 304
 Osborne, J.L. 82, 110; 98, 286; 103, 405
 Oster, L. 73, L21
 Östreicher, R. 114, 328; 118, 75
 Ostriker, J.P. 81, L7; 97, 403; 102, 142
 Ott, H.-A. 85, 365
 Otzen Petersen, J. 84, 356
 Ounnas, C. 112, 396 (49, 715)
 Owen, J.R. 92, 26
 Owen, T. 73, L7
 Oxenius, J. 76, 312; 97, 43; 127, 224
 Özel, M.E. 81, 33; 118, 114; 125, 130; 128, 245
 Ozernoy, L.M. 79, 35; 86, 315; 95, 39; 98, 50; 98, 57; 111, 1; 111, 16
 Pacini, F. 88, 367; 101, 159; 126, L11; 126, 7
 Packet, W. 75, 255; 82, 73; 95, 202; 102, 17

- Packett, W. 80, 242
 Paczyński, B. 82, 349; 88, 23
 Padrielli, L. 71, 272 (35, 169); 73, 40; 75, 259 (36, 359); 84, 269 (40, 91); 101, 418 (45, 61); 105, 200; 106, 181 (46, 473); 118, 171; 119, 163 (51, 179); 123, 359 (52, 411)
 Paerels, F.B.S. 87, 68; 90, 204
 Page, A.A. 118, 325
 Page, C.G. 119, 171
 Pagel, B.E.J. 101, 377
 Pakull, M. 93, L5; 102, L1; 122, 79; 124, 294
 Pakull, M.W. 101, L9; 104, 33
 Palacios, J.A. 98, 382
 Palagi, F. 87, 254 (41, 129); 111, 211 (49, 101); 125, 1
 Palla, F. 99, 289
 Pallavicini, R. 98, 316
 Palmer, P. 102, L13
 Palous, J. 87, 361
 Palumbo, G.G.C. 126, 221 (53, 373)
 Panagia, N. 75, 303; 81, 375; 82, 389; 85, 332; 90, 269; 96, 306; 98, 295; 99, 289; 102, 424; 105, 372; 106, 266; 107, 145; 107, 354; 111, 130; 123, 347; 128, 212
 Panek, R.J. 90, 341
 Pankonin, V. 75, 34; 75, 365; 80, L3; 87, 269; 89, 173; 99, 270; 99, 400; 110, 181 (48, 345)
 Pannunzio, R. 83, 385 (39, 423); 89, 251 (41, 319); 106, 181 (47, 159); 107, 362; 118, 208 (51, 63)
 Paolicchi, P. 104, 159; 124, 313
 Papadopoulos, K. 112, 377
 Papayannopoulos, T. 77, 75; 79, 197; 92, 33; 119, 21
 Papoular, R. 104, L1; 117, 46; 128, 335
 Paradijs, J. van 75, 112; 87, 210
 Paredes, J.M. 124, 309
 Paresce, F. 75, 260 (36, 371); 83, 58; 96, 23; 124, 300
 Parisot, J.P. 115, 216 (50, 147)
 Parma, P. 94, 61; 96, 412; 101, 194; 110, 169; 114, 400; 115, 423; 119, 163 (51, 179); 122, 305; 123, 359 (52, 411); 126, 311; 126, 412
 Parmar, A. 102, L1
 Parmeggiani, G. 124, 155 (53, 139)
 Parra, F. 88, 283 (41, 215)
 Parsignault, D. 81, 185
 Pasinetti, L.E. 99, 203 (44, 55); 99, 397; 101, 420 (45, 145); 107, 326
 Pasternak, M. 87, 328
 Paternò, L. 79, 184; 86, 40; 88, 240; 91, 328; 91, 356; 96, 369; 105, 133
 Paterson-Beeckmans, F. 121, 174
 Patnaik, A.R. 123, 107
 Patriarchi, P. 87, 254 (41, 129)
 Paturel, G. 71, 19; 71, 106; 86, 269 (40, 355); 88, 32; 91, 262 (42, 69); 99, 402 (44, 217); 102, 119; 106, 182 (47, 171); 107, 413 (47, 467); 113, 61; 114, 421 (50, 101); 118, 4; 126, 221 (53, 351)
 Paul, J. 90, L13
 Paul, J.A. 75, 340; 91, L3; 93, 71; 107, 390; 115, 404; 128, 245
 Pauliny-Toth, I.I.K. 77, 1; 79, 268; 81, 235; 85, 329; 88, L12; 91, 259; 95, 285; 95, 393 (43, 195); 97, L1; 100, 7; 101, 49; 102, 280 (45, 367); 108, 157
 Pauls, R. 92, 200
 Pauls, T. 71, 270 (35, 23); 73, L10; 73, 253; 82, 388; 84, 237; 85, 26; 91, L11; 91, 36; 92, 47; 92, 57; 97, 296; 98, L4; 103, 197; 103, 277; 112, 120; 127, 388
 Pauls, T.A. 77, L3; 104, 288; 110, L20; 115, 185; 124, 23; 124, 322
 Pauls, U. 126, 320
 Paulus, G. 116, 183
 Pauzat, F. 100, L14
 Pavlovski, K. 76, 362; 123, 326
 Pawlowicz, L.M. 86, 68
 Payne, H.E. 75, 365
 Peacock, A. 87, 276; 122, 124
 Pecker, J.C. 89, L8
 Pedersen, H. 72, 379 (35, 313); 94, L29; 110, 316; 121, L11; 122, 301
 Pedlar, A. 94, 238
 Pédoussaut, A. 71, 273 (35, 203); 74, 113; 81, 333; 107, 215; 115, 23; 121, 331 (52, 293); 127, 425 (54, 187)
 Pégourie, B. 128, 335
 Peimbert, M. 80, 155; 104, 72
 Pel, J.W. 72, 82; 99, L1; 124, 294
 Pelat, D. 81, 172; 95, 18; 95, 394 (43, 231); 105, 335
 Pelikhov, N.V. 98, 57
 Pellat, R. 109, 228; 115, 8
 Pellet, A. 72, 12; 106, 214
 Peña, J.H. 118, 209 (51, 71); 124, 153 (53, 81)
 Pence, W.D. 112, 394 (49, 631)
 Pendrel, J.V. 112, 181
 Peng, Q.-H. 113, 9; 117, 205
 Peniche, R. 118, 209 (51, 71); 124, 153 (53, 81)
 Penna, J.L. 110, 183 (48, 485); 123, 358 (52, 373)
 Penston, M. 74, L18; 79, 223
 Péquignot, D. 78, 29; 81, 121; 81, 356; 83, 52; 120, 249; 127, 42
 Peraiah, A. 71, 289
 Peralta, J.O. 74, 121
 Peralta, M.T. 74, 121
 Perault, M. 85, 244; 103, 63; 104, 101
 Percival, J. 75, 268
 Percy, J.R. 82, 172
 Perdang, J. 102, 109; 112, 35; 122, 39; 125, 6
 Perdang, P. 79, 261
 Pérez Garde, M. 93, 67
 Pérez Mollá, J. 91, 379 (42, 155); 100, 138
 Perie, M. 107, 413 (47, 467)
 Perinotto, M. 76, 69; 81, 215; 85, 332; 95, 127; 100, 241; 101, 88; 101, 247; 108, 314; 111, 130
 Perola, C. 97, 94
 Perola, G.C. 73, 54; 84, 228; 84, 245; 103, 35
 Perotti, F. 117, 38
 Perrier, C. 90, 207; 117, 199
 Perrin, M.-N. 94, 207; 128, 347
 Perry, C.L. 102, 281 (45, 439)
 Perry, J.J. 82, 99
 Perryman, M.A.C. 122, 17
 Persi, P. 76, 217; 90, 290; 92, 238; 111, L7; 112, 292; 127, 49
 Petelski, E.F. 87, 20
 Peters, B., 102, L9
 Peters, C.F. 104, 37
 Petersen, J.O. 80, 53; 96, 146; 117, 352; 121, 241
 Peterson, B.A. 76, 230
 Peterson, B.M. 93, 382
 Peterson, D.W. 92, 214
 Petford, A.D. 82, 249
 Peton, A. 101, 96; 114, 1
 Peton-Jonas, D. 102, 280 (45, 193)
 Petrini, D. 96, 380; 99, 401 (44, 171); 111, 279
 Petrou, M. 119, 21
 Petrou, N. 102, L9
 Pettersen, B.R. 82, 53; 95, 135; 97, 199; 99, 401 (44, 179); 118, 75; 120, 192; 123, 184
 Petterson, B.R. 80, 265
 Petterson, J.A. 81, L7
 Petterson, B. 107, 414 (47, 533)
 Pettini, M. 102, 351
 Peyrin, Y. 119, 165 (51, 277)
 Pfenniger, D. 127, 349
 Pfleiderer, J. 86, 268 (40, 351); 101, 320; 102, L21; 103, 220
 Pham Van, J. 77, 370; 111, 211 (49, 105); 111, 211 (49, 107); 126, 221 (53, 361)
 Philip, A.G.D. 123, 39
 Philipps, S. 98, 286; 103, 405
 Phillips, A.P. 85, 272
 Phillips, J.P. 71, 115; 79, 31; 83, 370; 116, 130; 116, 293; 117, 33
 Phillips, M.M. 76, L14
 Phillips, R.B. 106, 21
 Phillips, T.G. 73, 14; 82, 381
 Picat, J.P. 75, 176; 88, 97; 90, 344; 113, L1; 121, L4
 Picchio, G. 94, 52; 99, 31; 111, 326
 Piccioni, A. 86, 267 (40, 289); 95, 177; 100, 330; 117, 149; 118, 365; 124, 155 (53, 139)
 Pick, M. 79, 164; 87, 63; 108, 161; 111, 306
 Pickup, D.A. 127, 417
 Pietsch, W. 94, 234; 107, 350
 Pigatto, L. 102, 109

- Pirola, R. 100, 334 (44, 461)
 Pirola, V. 73, 364 (36, 33); 78, 250 (38, 193); 79, 254; 90, 48; 91, 372; 110, 351
 Piironen, J.O. 100, 326; 112, 172
 Pike, C.D. 128, 394
 Pilachowsky, C.A. 104, 72
 Pilkuhn, H. 101, 350
 Pineau des Forêts, G. 78, 159; 93, 347; 110, 163; 119, 321
 Pineault, S. 109, 294; 114, 177
 Pineda, F.J. 90, 283
 Pinkau, K. 87, 192
 Pipher, J.L. 74, 302; 77, 302; 86, 231; 104, 57; 109, 223; 119, 163 (51, 195)
 Piraux, J. 79, 132
 Pirronello, V. 93, 411; 96, 267; 103, L5; 104, 80; 118, 341; 120, 139; 123, 93
 Pismis, P. 97, 398
 Pitault, A. 82, 203; 91, 374; 97, L5; 108, 195; 120, 53
 Pittella, G. 77, 45; 95, 188
 Pitz, E. 72, 92; 74, 15; 82, 328; 103, 177; 110, 355
 Planck, B. 103, 177; 105, 364; 110, 111; 110, 115
 Planesas, P. 122, 219
 Platzcek, R.P. 84, 106
 Pneuman, G.W. 81, 161
 Poder, K. 101, 228
 Poeppel, W.G.L. 71, 319
 Poilane, Y. 127, 164
 Polcaro, V.F. 106, 174; 108, 249; 127, 333
 Polidan, R.S. 92, 212
 Polimene, M.L. 95, 138
 Pollard, D.J. 78, 133
 Pöllitsch, G.F. 97, 175
 Pollock, A.M.T. 94, 116
 Polnarev, A.G. 80, 104
 Polnitzky, G. 77, 372 (38, 89)
 Polzin, D. 101, 409
 Ponz, D. 102, 207; 119, 285
 Ponz, D.P. 112, 341
 Ponz, J.D. 96, 17
 Popov, M.V. 93, 85; 109, 340
 Pöppel, W.G.L. 84, 268 (40, 47); 94, 151; 95, 316; 103, 208 (46, 41); 126, 152
 Poquérusse, M. 97, 36; 123, 307
 Porter, N.A. 104, L4
 Potash, R.I. 95, 386
 Pottasch, S.R. 71, 274 (35, 257); 74, L15; 77, 189; 84, 284; 88, 1; 89, 336; 91, 378; 94, L13; 94, 259; 102, 237; 106, 1; 106, 229; 108, 111; 109, 182; 126, 31; 127, 320; 128, 325
 Pouquet, A. 105, 6; 126, 51
 Pozdnyakov, L.A. 75, 214
 Pračka, M. 93, 121
 Praderie, F. 76, 287; 86, 271; 96, 380; 98, 92; 99, 401 (44, 171); 107, 75; 127, 74; 128, 74
 Prasad, S.S. 114, 275
 Prasanna, A.R. 126, 111
 Predolin, F. 79, 354; 82, 386; 84, 268 (40, 57); 85, 259; 86, 264; 91, 254; 91, 261 (42, 15); 95, 395 (32, 251)
 Preite-Martinez, A. 84, 284; 91, 378; 96, 283; 99, 289; 126, 31
 Preston, G.W. 96, 401
 Preuss, E. 79, 268; 97, L1
 Preussner, P.-R. 115, 128
 Prévot, L. 85, 305; 90, L13; 99, L5; 103, 83; 113, L15; 119, 165 (51, 277); 125, 176 (53, 255)
 Prévot-Burnichon, M.L. 85, 305; 90, L13; 99, L5; 103, 83; 113, L15
 Prialnik, D. 72, 192; 88, 127
 Priest, E.R. 77, 233; 87, 126; 113, 269; 117, 220; 123, 80; 127, 153
 Pringle, J.E. 114, L4
 Proetel, K. 95, 94
 Pröll, H.J. 118, 206 (51, 1); 118, 207 (51, 16)
 Proszynski, M. 79, 8; 102, 299
 Protheroe, R.J. 84, 128; 92, 175
 Proust, D. 86, 157; 99, 221; 99, 401 (44, 179)
 Provoost, P. 81, 17; 84, 270 (40, 129)
 Provost, J. 94, 126; 122, 199
 Prudhomme, M. 81, 137
 Pucillo, M. 76, 242; 80, 9; 85, 29
 Puel, F. 115, 216 (50, 147)
 Puget, J.L. 76, 259; 78, 53; 80, 276; 83, L10; 84, 220; 94, 265; 103, 63; 106, 293
 Puget, P. 114, 351
 Purgathofer, A. 73, 365 (36, 79); 81, 215; 87, L5; 88, 275; 99, 218; 101, 247; 122, 325; 127, L5
 Purton, C.R. 104, 169 (46, 181); 122, 346
 Putsil'nik, S.A. 78, 248
 Pyper, D.M. 118, 313; 119, 324 (51, 365)
 Python, M. 80, 331 (38, 463); 90, 83
 Qiu-He Peng 107, 258
 Quarta, M.L. 98, 384
 Queiroz, M. 110, 183 (48, 485); 123, 358 (52, 373)
 Quenby, J.J. 87, 252 (41, 13)
 Querci, F. 77, 155; 111, 120
 Querci, M. 77, 155; 111, 120
 Quintana, H. 79, 70; 99, 204 (44, 87)
 Quintana, J.M. 73, 365 (36, 51); 83, 114
 Quiroga, R.J. 92, 186; 95, 199; 127, 245
 Radford, G.A. 126, 223 (53, 427)
 Radhakrishnan, V. 79, L9; 85, 249; 106, 105
 Rae, I.C. 119, 28; 126, 209
 Rafanelli, P. 76, 365; 76, 369 (37, 541); 81, 389 (39, 97); 87, 31; 103, 216; 108, 243; 116, 43; 117, 109
 Rafert, J.B. 91, 380 (42, 195)
 Raffaelli, G. 99, 397
 Raffaelli, J.C. 100, L10
 Rafferty, T.J. 86, 262; 114, 95; 114, 420 (50, 27)
 Rahe, J. 73, L7; 83, 363; 88, L9; 94, 285; 96, 202; 98, 27; 99, 166; 102, 282 (45, 473); 102, 337; 104, 256; 106, 70; 107, 385; 110, 246; 110, 281; 113, 76; 117, 283; 125, L1; 125, 34; 126, 357
 Rahunen, T. 102, 81; 109, 66; 117, 235
 Raimond, E. 98, 251
 Raine, D.J. 76, 179; 81, 128
 Rakos, K.D. 95, 394 (43, 209); 106, 379 (47, 221); 124, L11; 127, 366
 Rakosch, K.D. 90, 18; 97, 325
 Ramana Murthy, P.V. 81, L3
 Ramella, M. 90, 146; 119, 160; 127, L3
 Rampazzo, R. 115, 388
 Ramsden, D. 117, 38
 Ranieri, M. 127, 169
 Rankin, J. 77, 204; 88, 84
 Rankin, J.M. 101, 332
 Rao, A.P. 83, 256; 86, 373; 94, 72
 Raoult, A. 87, 63; 108, 161
 Rapisarda, M. 87, 88; 111, 365
 Rapley, G.G. 101, 33
 Rappaport, M.L. 85, 197
 Rappaport, S. 71, 217; 121, 119
 Rasmussen, I.L. 122, 301
 Rast, J. 83, 199; 87, L3
 Ratier, G. 89, 342
 Ray, D. 82, 368
 Rayet, M. 116, 183
 Rayo, J.F. 80, 155
 Re, S. 111, 365
 Reay, N.K. 72, 31; 117, 33
 Rebeiro, E. 85, 305; 103, 83; 119, 165 (51, 277); 125, 176 (53, 255)
 Reboul, H.J. 89, 272; 101, 420 (45, 129); 108, 85
 Recillas-Cruz, E. 97, 398; 112, 361
 Reddmann, T. 101, 350
 Reeckmans, F. 79, 223
 Reed, B.C. 111, 81; 112, 179 (49, 521); 118, 229
 Rees, D.E. 74, 1; 88, 302; 115, 1
 Rees, M.J. 81, 263
 Reeves, H. 93, 189
 Refsdal, S. 78, 303; 84, 200; 93, 297; 109, 117; 128, 156
 Regev, O. 89, 61; 114, 188; 123, 331; 126, 146
 Rego, M. 76, 249; 82, 221; 82, 395 (39, 251); 99, 141; 102, 207; 113, 94; 119, 227; 119, 243
 Reich, W. 72, 270; 78, L13; 78, 251 (38, 251); 82, 275; 89, 204; 91, 381 (42, 227); 92, 323 (42, 299); 93, 27; 99, 17; 106, 314; 110, 180 (48, 219); 113, 348; 115, 428; 125, 146; 128, 268
 Reichmann, E.J. 80, 218
 Reid, R.H.G. 90, 97

- Reif, K. 106, 190; 117, 172 (50, 451); 120, 63
- Reimers, D. 99, L8; 107, 36; 107, 292; 116, 341; 119, 319; 123, 257; 124, 241; 126, 225; 127, 227
- Reinecke, M. 100, 164
- Reipurth, B. 77, 227; 93, L5; 95, 210 (43, 141); 100, 333 (44, 379); 101, 7; 112, 180 (49, 571); 117, 183; 119, 14; 121, 271; 121, 332 (52, 323); 128, 261 (54, 301)
- Reiz, A. 125, 175 (53, 181)
- Remie, H. 105, 85
- Renner, T.R. 117, 149
- Rensbergen, W. van 75, 83
- Renson, P. 77, 366; 92, 30; 99, 202 (44, 23); 103, 210 (46, 151); 119, 165 (51, 267)
- Renzini, A. 71, 66; 94, 175; 118, 217
- Repetur, H. 73, 370 (36, 307); 91, 380 (42, 193)
- Rephaeli, Y. 114, 405; 123, 98
- Reppin, C. 94, 234; 107, 350
- Retallack, D.S. 102, 225; 106, 105; 117, 115
- Rhodes, E.J., Jr. 72, 177
- Ribes, E. 73, 314; 91, 129; 119, 197
- Ricciardi, O. 119, 285
- Rice, J.B. 84, 359; 106, 7
- Richardson, K.J. 116, 130; 116, 293
- Richter, I. 82, 328; 103, 177; 103, 210 (46, 115); 110, 111; 110, 115; 110, 355; 121, 146
- Richter, K. 102, 415
- Richter, O.-G. 91, 259; 109, 155; 109, 331; 111, 193; 125, 187
- Richtler, T. 118, 201; 119, 75; 128, L3
- Rickard, L.J. 102, L13
- Rickett, B.J. 123, 191
- Ricketts, M.J. 111, L9; 118, L3; 119, 171
- Rickman, H. 82, 183; 84, L11; 102, 165; 102, 279 (45, 177); 104, 148; 114, 420 (50, 23)
- Ricort, G. 76, 324; 97, 114; 99, 232; 107, 333
- Riegler, G.R. 126, 70
- Rieke, G.H. 99, 108
- Righini, A. 79, 184; 85, 255; 107, 333; 109, 233
- Riihimaa, J.J. 78, L21
- Rimini, E. 96, 267
- Rindermann, K. 81, 157
- Ringuelet, A.E. 100, 79
- Rio, Y. 102, L9
- Ripken, H.W. 87, 20; 102, 359; 122, 181
- Rishel, B.E. 102, 281 (45, 443)
- Ritter, H. 76, 168; 78, 303; 85, 362; 86, 204; 91, 161; 123, 33; 124, 267
- Rius, A. 124, 309
- Robba, N.R. 87, 88; 88, 8; 111, 365
- Robbrecht, W. 121, 286
- Robe, H. 75, 14; 97, 182; 120, 215
- Roberti, G. 92, 63
- Roberts, B. 119, 28
- Roberts, D.H. 76, 254
- Roberts, G. 93, 219
- Roberts, M.S. 85, 266 (40, 215)
- Roberts, W.W., Jr. 108, 76
- Robertson, J.G. 93, 113; 111, 299
- Robin, A. 115, 218 (50, 251); 119, 165 (51, 277)
- Robinson, R.D. 108, 322
- Robinson, S.E. 97, 195
- Robnik, M. 91, 305; 107, 222; 120, 227
- Robson, E.I. 116, 130
- Roca Cortes, T. 91, L9
- Rocca, A. 94, 126; 111, 252
- Rocca, B. 77, L10
- Rocca-Volmerange, B. 75, 371; 86, 299; 90, L13; 90, 73; 99, L5; 104, 177; 109, 355; 113, L15
- Roche, P.F. 76, 60
- Rocher, P. 82, 362; 117, 171 (50, 423); 121, 332 (52, 333)
- Roddier, P. 79, 1
- Rodonó, M. 76, 242; 89, 123; 91, 381 (42, 245); 106, 311; 117, 149
- Rodrigo, R. 112, 229
- Rodriguez, L.F. 95, 388
- Roger, R.S. 82, 393 (39, 133); 94, 238; 103, 370
- Rogers, A.E.E. 86, 364
- Rohlfis, K. 76, 24; 87, 175; 100, 333 (44, 437); 102, 91; 105, 296; 112, 116; 113, 237; 126, 152; 128, 426
- Rojas, S. 103, 207 (46, 7)
- Roland, G. 108, 201
- Roland, J. 78, 252 (38, 295); 87, 132; 93, 407; 96, 235; 100, 7; 102, 142; 107, 267; 116, 60
- Rolland, A. 73, 365 (36, 61); 83, 114
- Romano, G. 76, 370 (37, 551); 99, 206 (44, 159); 105, 369
- Röndigs, G. 71, 44; 75, 182
- Rönnäng, B. 77, 1; 78, 239; 79, 233
- Rood, H.J. 108, L7
- Roos, N. 76, 75; 95, 349; 104, 218; 114, 41
- Rosa, M. 85, L21; 105, 410; 108, 339; 124, 154 (53, 97)
- Rosado, M. 72, 73; 97, 342; 102, 175; 115, 61
- Rose, W.B. 84, 212
- Röser, H.-J. 80, 179; 103, 374; 105, 362; 118, 208 (51, 41)
- Röser, S. 71, 269; 85, 316; 118, 345
- Rosino, L. 72, 287; 76, 240; 85, 269; 87, 31; 101, 418 (45, 53); 108, 243; 116, 35; 116, 43
- Rosolen, C. 86, 349
- Rossi, L. 74, 195; 85, 252; 102, 386; 122, 339
- Rostas, J. 125, L5
- Roth, M. 86, 217; 106, 89
- Roth, M.L. 80, 48
- Rothen, F. 98, 36
- Rothenflug, R. 81, 218; 87, 196; 103, 263
- Rothermel, H. 126, 387
- Rots, A.H. 80, 255; 88, 283 (41, 189); 120, 74
- Rouan, D. 79, 102; 83, 22; 83, 140; 87, 169; 117, 164
- Roueff, E. 72, 361; 99, 394; 117, 172 (50, 505); 125, L5
- Rouse, C.A. 71, 95; 102, 8; 126, 102
- Rousseau, J. 85, 305; 88, 283 (41, 219); 103, 83; 119, 165 (51, 277); 125, 176 (53, 255)
- Rousseau, M. 107, 413 (47, 467)
- Roux, S. 94, 350; 95, 395 (43, 257)
- Rovira, M. 100, 79
- Rowan-Robinson, M. 82, 381
- Roxburgh, I.W. 91, 356
- Rózycka, M. 81, 288; 81, 347; 82, 288; 83, 118; 125, 45
- Rubio, M. 111, 284; 127, 424 (54, 135)
- Rucinski, S.M. 104, 260; 112, 273; 121, 217; 121, 330 (52, 281); 127, 5; 127, 84
- Rudak, B. 82, 349
- Ruder, H. 89, 241; 94, 194; 95, 204; 100, 164; 115, 90; 117, 156; 126, 251
- Rudnick, L. 121, 332 (52, 317)
- Rudnicki, K. 105, 21
- Ruf, K. 113, 155; 115, 185; 128, 279
- Rufener, F. 74, 54; 81, 389 (39, 121); 92, 325 (42, 383); 102, 280 (45, 207); 103, 208 (46, 25); 110, 184 (48, 503); 119, 279; 121, 45; 121, 162 (52, 13); 121, 162 (52, 21); 128, 262 (54, 371)
- Ruffini, B. 124, 236
- Ruffini, R. 97, L12; 103, L7; 114, 219; 119, 35; 125, 265
- Ruggles, C.L.N. 80, 97
- Ruiz, M.T. 111, 375
- Ruiz del Arbol, J.A. 85, 302; 91, 379 (42, 155); 100, 138; 107, 43
- Ruland, F. 92, 70; 92, 325 (42, 391)
- Ruland, W. 95, 278
- Rusca, C. 72, 129
- Ruschenplatt, G. 91, 175; 91, 181
- Rusconi, L. 73, 365 (36, 73); 77, L10; 92, 324 (42, 347); 101, 168; 104, 169 (46, 173); 113, 250; 124, 154 (53, 109); 128, 171
- Russo, G. 75, 261 (36, 415); 78, 250 (38, 187); 82, 394 (39, 235); 96, 328; 97, 104; 99, 66; 102, 20; 102, 279 (45, 187); 103, 57; 106, 378 (47, 211); 107, 197; 109, 274; 109, 368; 111, 212 (49, 123); 119, 325 (51, 435); 121, 331 (52, 311)
- Rust, D. 91, 322
- Rutten, R.J. 83, 384 (39, 415); 115, 104; 117, 21
- Ruzmaikin, A.A. 78, 1
- Ryabchikova, T.A. 71, 295
- Rydbeck, G. 113, L18

- Rydbeck, O.E.H. 97, 192; 100, L30
 Ryś, S. 99, 388
 Ryter, C.E. 76, 259; 84, 220; 94, 265
- Sabano, Y. 98, 186
 Sabbadin, F. 80, 212; 81, 389 (39, 97); 84, 216; 94, 25; 99, 392; 100, 66; 106, 176; 109, 131; 110, 105; 114, 419 (50, 1); 117, 172 (50, 523); 118, 210 (51, 127); 123, 147; 123, 358 (52, 395); 123, 359 (52, 399); 125, 112
 Sacco, B. 90, 140; 91, L3; 128, 245
 Sadakane, K. 113, 135
 Sadeh, D. 103, 367
 Sadler, E.M. 128, L3
 Sadžakov, S. 123, 360 (52, 455)
 Saez, M. 73, 365 (36, 51); 79, 347; 83, 114; 101, 259
 Saha, H.P. 116, 224; 126, 415
 Sahade, J. 87, L7; 126, 115
 Sahal-Bréchet, S. 100, 231
 Sahm, A. 95, 278
 Saio, H. 85, 263
 Saisse, M. 97, 334
 Sakurai, T. 98, 316
 Salas, L. 111, 43
 Salgado, C.W. 81, 387 (39, 11)
 Saliba, G.J. 115, 1
 Salinari, P. 78, 226; 82, 86; 90, 304; 94, 299; 100, L16; 102, 197; 125, 342
 Salonen, E. 118, 208 (51, 47)
 Salpeter E.E. 110, 300
 Salter, C.J. 74, 361; 76, 120; 81, 240; 84, 237; 88, 285; 92, 47; 92, 57; 95, 177; 97, 296; 100, 209; 100, 330; 103, 277; 103, 393; 105, 176; 106, 181 (47, 1); 109, 145
 Salvador Sole, E. 78, 252 (38, 295); 83, 95; 87, 132; 87, 165; 96, 235; 117, 17
 Salvati, M. 71, 51; 72, 261; 126, 7; 128, 165
 Salzman, J. 109, 201
 Samain, D. 74, 225
 Sambuco, A.M. 107, 414 (47, 485)
 Sanchez, M. 77, 370; 88, 283 (41, 215); 96, 193; 102, 371
 Sanchez Magro, C. 83, 370; 95, 206
 Sancisi, R. 74, 73; 78, 217; 90, 176
 Sandell, G. 71, 198; 78, 264; 83, 226; 97, 317; 99, 80; 104, 166; 118, 306; 124, 139
 Sandeman, R.J. 86, 95; 87, 242
 Sanders, R.H. 96, 164; 119, L3
 Sanders, W.L. 85, 365; 88, 102; 102, 281 (45, 443); 118, 361; 119, 326 (51, 541); 121, 237
 Sandford, M.C.W. 93, 219
 Sandqvist, A. 110, 336
 Sandqvist, Aa. 89, 187
 Sanduleak, N. 72, 379 (35, 347)
 Santangelo, P. 86, 212; 107, 172; 117, 365; 126, 403
 Santin, P. 80, 9; 85, 29; 90, 146
 Santos, E. 106, 379 (47, 221)
 Sanz, J.L. 120, 109
 Sarath, B. 89, 259
 Sarazin, C.L. 108, L7; 123, L1
 Sareyan, J.-P. 72, 313; 97, 415 (43, 359); 122, 193
 Sargent, A.I. 75, L1; 91, L1; 94, 377; 115, 308
 Sargent, W.L.W. 73, 369 (36, 259); 76, 50; 99, 403 (44, 229); 101, L5
 Sarma, N.V.G. 85, 249
 Sarmiento, A.F. 119, 167
 Sato, N. 107, 320
 Sato, S. 119, L1
 Satoh, C. 90, 215
 Sauval, A.J. 108, 201; 111, 210 (49, 77)
 Savage, A. 123, 353
 Savage, B.D. 85, 1
 SAVEDOFF, M.P. 94, 109; 107, L3; 112, L1
 Savonije, G.J. 71, 352; 81, 25; 83, 375
 Sawyer, C. 111, 306; 116, 217
 Saxner, M. 104, 240
 Scalise, Jr. E. 85, 149; 104, 166; 107, 272; 124, 139
 Scalo, J.M. 74, 6; 76, 346; 82, 152
 Scaltriti, F. 71, 270 (35, 63); 72, 378 (35, 291); 73, 364 (36, 1); 83, 249; 84, 269 (40, 85); 91, 1; 91, 381 (42, 245); 100, 326; 101, 273; 104, 148; 115, 321; 117, 149; 123, 326
 Scardia, M. 78, 250 (38, 181); 97, 416 (43, 375); 102, 281 (45, 431); 104, 169 (46, 173); 106, 182 (47, 167); 107, 362; 108, 141; 112, 179 (49, 503); 114, 419 (50, 19); 119, 324 (51, 417); 126, 222 (53, 395); 126, 222 (53, 399); 126, 223 (53, 433)
 Scarfe, C.D. 81, 388 (39, 23)
 Scarsi, I. 87, 88
 Scarsi, L. 128, 245
 Schaeffer, R. 126, 121
 Schafgans, J.J. 72, 378 (35, 279)
 Schaifers, K. 94, 333
 Schallwich, D. 71, L15; 95, 393 (43, 155); 124, 326
 Scharmer, G.B. 117, 83
 Schatz, G. 122, 327
 Schatzman, E. 74, 12; 78, 323; 96, 1
 Schatzman, M. 111, 104
 Schermann, A. 106, 379 (47, 221)
 Scherzer, R. 75, 114
 Schiavo-Campo, P. 99, 403 (44, 241)
 Schieven, G. 123, 360 (52, 463)
 Schiffer, F.H. 112, 341
 Schiffer, J.G. 118, 75
 Schiffer, R. 116, 1
 Schild, H. 72, L1; 75, L17; 101, 118; 127, 238
 Schild, R. 120, 223
 Schilizzi, R.T. 71, 253; 77, 1; 77, 371 (38, 11); 79, L26; 96, 310; 96, 316; 96, 365; 97, 413; 105, 278; 114, 400; 126, 412
 Schindler, S.M. 73, 240
 Schleicher, H. 97, 417 (43, 427); 100, 1; 102, L23; 104, 198
 Schlickeiser, R. 94, 57; 94, 229; 106, L5; 107, 148; 107, 186; 107, 378; 113, 314; 116, 10; 127, 201
 Schloerb, F.P. 97, 195; 127, L10
 Schlosser, W. 75, 112; 83, 383 (39, 305); 84, 50; 114, 60; 115, 115; 118, 206 (51, 1); 118, 207 (51, 16); 119, 42
 Schmadel, L.D. 76, 130; 110, 198; 112, 395 (49, 691)
 Schmahl, E.J. 82, 265; 90, 192; 91, 377; 94, 72; 108, 188
 Schmid-Burgk, J. 80, L3; 99, 400; 108, 169; 118, 203
 Schmidt, H.U. 90, 54; 126, 45; 127, L15
 Schmidt, J. 81, 235; 125, L19
 Schmidt, Th. 95, 94; 100, 249
 Schmidt, W. 75, 223; 95, 366; 118, 1; 123, 319
 Schmidt-Kaler, Th. 82, 238; 83, 383 (39, 305); 84, 50; 88, 41; 89, 67; 94, 16; 97, 417 (43, 427); 105, 400; 107, 311; 114, 60; 115, 115; 118, 206 (51, 1); 118, 207 (51, 16); 120, 269; 126, 352
 Schmieder, B. 74, 273; 84, 99; 97, 310; 102, 124; 114, 192; 119, 197; 127, 337
 Schmitt, D. 97, 373
 Schmitt, J.H.M.M. 87, 236
 Schmitt, W. 94, 194; 117, 156
 Schmitz, F. 74, 229; 84, 93; 84, 191; 93, 178; 97, 101; 120, 234; 125, 333
 Schmutz, W. 106, 379 (47, 257); 126, 59
 Schneider, H. 99, 205 (44, 137)
 Schneider, J. 76, 297; 98, 412; 110, L11; 115, 54; 118, 368
 Schnell, A. 106, 379 (47, 221); 122, 325; 127, L5
 Schnopper, H. 122, 301
 Schnopper, H.W. 90, 283
 Schober, H.J. 72, 379 (35, 337); 73, 364 (36, 1); 77, 372 (38, 91); 78, 251 (38, 265); 78, 251 (38, 269); 81, 387 (39, 3); 89, 252 (41, 335); 91, 1; 96, 302; 99, 199; 100, 311; 100, 326; 100, 333 (44, 401); 104, 296; 105, 419; 107, 402; 108, 415 (48, 57); 115, 257; 117, 362; 120, 106; 124, 153 (53, 71); 124, 153 (53, 77); 127, 301
 Schober, J. 87, 254 (41, 85)
 Schöchlin, W.A. 92, 260
 Schoembs, R. 77, 7; 91, 25; 94, L29; 97, 185; 115, 190; 124, 287; 128, 37
 Schöffel, E. 73, 369 (36, 287)
 Scholl, H. 72, 246; 93, 62; 111, 346; 112, 157
 Scholtes, M. 78, 11
 Scholz, M. 108, 387; 112, 76; 118, 203

- Schönberner, D. 79, 108; 97, 291; 102, 73; 103, 119; 107, 93; 113, L22; 116, 273
- Schönfelder, V. 110, 138
- Schorr, B. 78, 299
- Schraml, J. 71, 270 (35, 23); 101, 49
- Schramm, K.J. 121, 69
- Schreiber, R. 91, 311
- Schrijver, C.J. 127, 289
- Schrijver, J. 81, 185; 86, 268 (40, 323); 86, 268 (40, 335); 87, 55; 87, 261
- Schröder, K. 116, 255
- Schröder, K.-P. 124, L16; 124, 241
- Schröder, R. 76, 168; 88, 102; 102, 281 (45, 443); 119, 326 (51, 541)
- Schroll, A. 73, 193; 104, 296; 107, 402; 120, 106; 124, 153 (53, 77)
- Schröter, E.H. 117, 305
- Schrüfer, E. 111, L4
- Schubart, J. 76, 130; 114, 200
- Schulte in den Bäumen, J. 94, 280
- Schulte-Ladbeck, R. 114, 328; 120, 203
- Schultz, G.V. 75, 351; 83, L5; 91, 264 (42, 119); 101, 417 (45, 5); 124, 123
- Schulz, A. 72, 92; 74, 15; 95, 94; 100, 249; 121, 158
- Schulz, H. 76, 262; 94, 272; 97, 418 (43, 473); 102, 331; 103, 216; 115, 209; 117, 109; 118, 166
- Schüssler, M. 71, 79; 72, 348; 89, 26; 94, L17; 97, 373
- Schuster, H.E. 76, 130; 76, 368 (37, 483); 82, 394 (39, 173); 88, 350; 96, 120; 97, 415 (43, 307); 103, 208 (46, 57); 104, 172 (46, 311); 112, 180 (49, 577)
- Schwan, H. 84, 251; 93, 67; 99, 311; 103, 427; 104, 155; 119, 307; 124, L7
- Schwartz, S.J. 112, 84; 112, 93
- Schwarz, M.P. 107, 101
- Schwarz, U.J. 71, 270 (35, 1); 89, 150; 101, 305; 110, 100; 112, L6; 118, 157; 122, 143
- Schwarz H.E. 126, 260
- Schwehm, G. 95, 373
- Schweizer, F. 127, 361
- Schwerdtfeger, H. 116, 117
- Scott, J.S. 74, 116
- Scott, S.L. 123, 191; 123, 207
- Scoville, N.Z. 76, 140; 82, 337
- Scuflaire, R. 85, 20; 99, 39; 110, 50; 111, 371; 113, 219; 119, 253
- Seagquist, E.R. 82, 272
- Searle, L. 95, 105; 95, 116; 110, 61; 110, 79
- Sears, T.J. 127, 241
- Secco, L. 125, 338
- Sedlmayr, E. 76, 158; 77, 165; 86, 380
- Sedmak, G. 73, 365 (36, 73); 76, 242; 77, L10; 80, 9; 85, 29; 92, 324 (42, 347); 101, 168; 104, 93; 104, 169 (46, 173); 113, 250; 124, 154 (53, 109); 128, 171
- Segal, I.E. 82, L3; 115, 398; 118, 180; 123, 151
- Seggewiss, W. 72, 332; 77, 128; 83, 328; 86, 87; 96, 174; 114, 135; 125, 83
- Seidemann, P.K. 105, 359
- Seiden, P.E. 98, 371
- Seidensticker, K.J. 114, 60; 118, 206 (51, 1)
- Seielstad, G.A. 96, 316
- Seiradakis, J.H. 73, 46; 85, 353; 89, 95; 91, 341; 101, 158; 102, 134
- Seitter, W.C. 75, 297; 81, 157
- Seitz, M. 109, 10
- Selby, M.J. 83, 370; 95, 206
- Seldner, M. 112, 321
- Sellwood, J.A. 89, 296; 99, 362
- Selvaggi, G. 127, 169
- Selvelli, P.L. 74, L18; 75, 316; 79, 223; 106, 98; 106, 380 (47, 295); 107, 200
- Sembay, S. 125, 52
- Semel, M.D. 74, 1; 91, 369; 97, 75
- Semeniuk, I. 81, 388 (39, 29); 89, 223
- Send, U. 112, 235
- Sengonca, H. 118, 208 (51, 27); 126, 221 (53, 363)
- Serra, G. 76, 259; 84, 220; 94, 265; 106, 293
- Serrano, A. 80, 155; 106, 89
- Sestili, M. 111, 312
- Setti, G. 76, L1; 118, L1
- Severino, G. 100, 191; 109, 90; 127, 33
- Severny, A.B. 88, 317; 116, 312
- Sèvre, F. 72, 45
- Seward, F.D. 126, 357
- Sezer, C. 118, 208 (51, 27); 126, 221 (53, 363); 128, 260 (54, 193)
- Shaffer, D.B. 76, L21; 79, 268; 97, L1; 98, 205
- Shaham, J. 74, 186; 77, L7; 77, 145; 85, 154
- Shakeshaft, J.R. 72, L9
- Shallis, M.J. 79, 48; 81, 336; 81, 340; 82, 249; 97, 203
- Shane, W.W. 82, 314; 112, 396 (49, 745); 116, 237
- Shapiro, I.I. 86, 364
- Shara, M.M. 72, 192
- Sharma, R.R. 112, 377
- Sharp, N.A. 74, 308; 92, 222
- Sharpless, S. 77, 302; 104, 57; 109, 223
- Shaver, P.A. 73, L17; 76, 1; 77, 316; 78, 75; 78, 116; 79, 312; 82, L1; 82, 272; 87, 255; 89, 150; 90, 34; 91, 279; 94, 259; 96, 365; 102, 225; 105, 306; 106, 105; 112, 120; 115, 293; 117, 115; 118, 301
- Shaviv, G. 72, 192; 73, 358; 88, 117; 88, 127; 89, 61; 92, 273; 99, 73; 109, 201; 110, 300
- Shaw, R.L. 76, 188
- Sheridan, K.V. 116, 217
- Sherwood, W.A. 83, 263; 101, 72; 101, 417 (45, 5); 115, 218 (50, 261); 117, L5; 124, 123; 127, 195
- Shibahashi, H. 123, 283
- Shibai, H. 97, 139
- Shields, G.A. 79, 56
- Shine, R. 119, 233
- Shine, R.A. 111, 136; 115, 367
- Shlosman, I. 73, 358
- Sholomitski, G.B. 124, 326
- Shostak, G.S. 71, 272 (35, 163); 81, 167; 81, 223; 81, 371; 96, 393; 105, 351; 115, 293; 119, L3
- Shustov, B.M. 98, 125
- Sibille, F. 79, L5; 79, 315; 94, 350; 95, 395 (43, 257); 120, 237
- Sicardy, B. 108, 296; 121, L4
- Siciliano, F. 89, 251 (41, 319); 106, 181 (47, 159); 118, 209 (51, 77)
- Sieber, W. 73, 46; 74, 361; 84, 260; 87, 282; 90, 58; 93, 85; 100, 91; 100, 107; 103, 393; 106, 180 (46, 421); 109, 340; 113, 311; 113, 314
- Siegmán, B. 74, 100; 117, 172 (50, 451)
- Sienkiewicz, R. 85, 295
- Siewert, C.E. 109, 195
- Signore, M. 96, 36
- Silk, J. 122, 330
- Sillanpää, A. 118, 208 (51, 47)
- Silveri, P. 124, 155 (53, 139)
- Silvestro, S. 85, 101
- Simard-Normandin, M. 86, 268 (40, 319); 95, 208 (43, 19); 108, 416 (48, 137)
- Simien, F. 72, 12; 102, 119; 106, 214; 128, 405
- Simmons, G.J. 81, 340; 112, 209
- Simmons, J.F.L. 91, 97
- Simon, G. 89, L8; 111, 136; 114, 192; 115, 367
- Simon, G.W. 76, 35
- Simon, J.L. 103, 223; 114, 125; 120, 197
- Simon, K.P. 95, 244; 98, 211; 99, L15; 101, 276; 101, 323; 104, 249; 106, 254; 107, 313; 108, 387; 118, 245; 121, 85; 125, 34
- Simon, M. 75, 114
- Simon, N.R. 74, 30; 75, 140
- Simons, S. 77, 152
- Singh, K.P. 113, 73; 113, 167; 117, 319; 120, 326; 126, 70
- Singh, P.D. 84, 177; 95, 383; 98, 384; 108, 369; 113, 199
- Sinha, R.P. 76, 258 (37, 403)
- Sinnerstad, U. 86, 270 (40, 395)
- Sirois, A. 75, 291
- Sisteró, R.F. 78, 249 (38, 171)
- Sivan, J.P. 97, 334; 121, 19
- Sivertsen, S. 95, 394 (43, 221)
- Skellern, D.J. 78, 75
- Slettebak, A. 127, 231
- Slottje, C. 99, 401 (44, 165); 103, 331; 122, 177

- Smaldone, L.A. 107, 414 (47, 485)
 Smarr, L. 113, 285
 Smeding, A.G. 71, 274 (35, 257)
 Smeyers, P. 106, 317; 125, 193
 Smirnova, T.V. 93, 85; 109, 340
 Smith, A.M. 73, L7
 Smith, G. 81, 100; 81, 108; 103, 351; 117, 177
 Smith, H. Jr. 76, 192
 Smith, J.A. 92, 163
 Smith, J.B. 74, 129
 Smith, J.E. 77, 372 (38, 79)
 Smith, L.J. 106, 379 (47, 257); 128, 261 (54, 229)
 Smith, M.D. 81, 282; 113, 285
 Smith, R.M. 127, 361
 Smolinski, J. 86, 113
 Smoluchowski, R. 110, 43; 127, 345
 Smriglio, F. 124, 151 (53, 1)
 Smylie, D.E. 112, 181
 Smyth, M.J. 100, 334 (44, 451)
 Snell, R.L. 118, 337
 Snijders, M.A.J. 85, 1
 Snoek, C. 121, 327
 Snow, T.P. 79, L28
 Snow, T.P., Jr. 91, L7
 Snyder, L.E. 126, 393
 Sôma, M. 128, 128
 Sobol, I.M. 75, 214
 Sobouti, Y. 89, 259; 89, 314; 100, 319
 Söderhjelm, S. 89, 100; 107, 54; 110, 156
 Sodin, L.G. 87, 188
 Soffel, M.H. 116, 111; 126, 251
 Sofue, Y. 72, 270; 78, 251 (38, 251); 91, 335; 124, 152 (53, 57)
 Soglasnov, V.A. 93, 85; 109, 340
 Soifer, B.T. 74, 302
 Soker, N. 125, L12
 Sokoloff, D.D. 78, 1
 Sol, H. 100, 7
 Soldal, O. 104, 99
 Solf, J. 92, 51; 101, 241; 106, 307; 113, 142; 116, 54
 Solheim, J.E. 111, 212 (49, 109); 117, 171 (50, 283)
 Sollazzo, C. 78, 250 (38, 187); 96, 328; 97, 104; 99, 66; 102, 20; 102, 279 (45, 187); 106, 378 (47, 211); 107, 197; 109, 274
 Solomon, S. 97, 415 (43, 337)
 Soltau, D. 107, 211
 Song, D.J. 125, 265
 Sornette, B. 90, 344
 Soru-Escout, I. 79, 138
 Sotirovski, P. 106, 181 (47, 145)
 Souffrin, P. 74, 9; 78, 36; 106, 14; 109, 205
 Soulié, G. 95, 211 (43, 146); 107, 417 (47, 611); 121, 331 (52, 299); 128, 261 (54, 281)
 Souriau, J.M. 78, 87; 108, 256
 Soutoul, A. 102, L9
 Spada, G. 76, 217; 92, 238
 Spaenhauer, A.M. 71, 274 (35, 249); 83, 234; 107, 412 (47, 441); 117, 347; 119, 326 (51, 533); 124, 331
 Spangler, S.R. 79, 243; 103, 370
 Sparks, W.M. 85, 1
 Speich, D.M. 74, 129
 Spencer, J.H. 78, 239; 101, 49; 108, 157
 Spenser, P.M. 76, 60
 Sperauskas, J. 99, 152
 Speroni, N. 79, 184
 Spicer, D.S. 105, 221
 Spinrad, H. 86, 50
 Spite, F. 76, 150; 80, 61; 89, 118; 103, L11; 115, 357; 128, 252
 Spite, M. 76, 150; 80, 61; 81, 365; 89, 118; 94, 207; 101, 265; 103, L11; 115, 357; 124, 172; 128, 252
 Spoelstra, T.A.T. 120, 313; 126, 433
 Spreckels, H. 108, 206
 Spruit, H.C. 98, 155; 102, 129; 106, 58; 108, 348; 108, 356; 113, 261; 113, 350; 124, 267; 125, 59
 Sramek, R.A. 90, L1
 Sreekantan, B.V. 81, L3; 117, 319
 Sreenivasan, S.R. 82, 73
 Sørensen, G.O. 97, 192
 Srinivasan, G. 108, 143
 Staaf, Ö. 106, 327
 Stabell, R. 93, 297
 Stacy, J.G. 117, 171 (50, 377)
 Stafella, F. 103, 382
 Stahl, O. 90, 338; 99, 351; 103, 94; 103, 427; 108, 102; 110, 272; 112, 111; 113, 76; 114, 131; 120, 287; 127, 49
 Stalio, R. 77, L10; 84, 369; 92, 324 (42, 347); 100, 183; 101, 168; 122, 9; 128, 171
 Staller, R.F.A. 98, 140; 118, 285
 Standish, E.M. 102, 371
 Standish, E.M., Jr. 101, L17; 114, 297; 115, 20; 125, 150
 Stannard, D. 116, 60
 Stanzel, R. 78, 251 (38, 265); 81, 387 (39, 3)
 Stark, A.A. 78, L1; 88, L1; 93, L1
 Stark, D. 93, 241
 Starobinsky, A.A. 80, 104
 Stasińska, G. 81, 121; 84, 320; 85, 359; 93, 362; 106, 158; 110, 180 (48, 299); 118, 234
 Staubert, R. 94, 234; 107, 350; 117, 215
 Staude, H.J. 71, 269; 109, 320
 Staude, J. 100, 284
 Steenbock, W. 99, 192; 107, 93; 126, 325
 Steenman-Clark, L. 118, 147
 Steffen, P. 93, 27; 113, 348
 Stehlé, C. 127, 263
 Stein, R.F. 105, 417; 106, 9
 Steinle, H. 107, 350
 Steinlin, U.W. 117, 347
 Steinolfson, R.S. 115, 39; 115, 50
 Stella, L. 103, L7; 119, 35; 125, 265
 Stellmacher, G. 75, 263; 82, 157; 86, 245; 95, 229; 103, 211; 114, 347; 119, 261
 Stellmacher, I. 80, 301
 Stencil, R.E. 75, 260 (36, 377); 83, 384 (39, 415); 99, 73; 126, 407
 Stenflo, J.O. 72, 67; 84, 60; 84, 68; 88, 302; 121, 164 (52, 161)
 Stenholm, B. 72, 379 (35, 303)
 Stenholm, L.G. 86, 105; 89, 264; 90, 134; 91, 261 (42, 23); 92, 142; 117, 41; 124, 247; 127, 195
 Stenhouse, J.E. 73, 151
 Stepień, K. 86, 240; 92, 171; 100, 159
 Steppe, H. 78, 125; 85, 329; 88, L12; 88, 354; 89, 169; 101, 315; 113, 150; 123, 107; 127, 195
 Sterken, C. 71, 270 (35, 69); 78, 287; 85, 106; 99, 351; 103, 427; 118, 325
 Stern, R. 83, L1
 Stettler, P. 87, L3
 Steube, R. 78, L13
 Stewart, B.G. 126, 260
 Stewart, P. 75, 185; 86, 163
 Stewart, R.T. 116, 217
 Stickland, D.J. 77, 359; 79, 223; 85, 138; 102, 296; 128, 394
 Stier, M.T. 126, 10
 Stift, M. 97, 417 (43, 427)
 Stift, M.J. 76, 252; 80, 134; 82, 142; 112, 149
 Stix, M. 86, 40; 88, 240; 91, 328; 93, 339; 118, 1; 118, 363
 Stobie, R.S. 107, 415 (47, 541)
 Stoeger, W.R., S.J. 78, 124
 Stoffel, H. 98, 286; 100, 209; 103, 405; 106, 181 (47, 1)
 Stoll, M. 99, 218
 Storey, P.J. 71, L5; 74, 244; 89, 308; 96, 91; 99, 177; 102, 351; 109, 271; 110, 295; 113, 21; 115, 205; 126, 75
 Stothers, R. 77, 121
 Strafella, F. 72, 241; 98, 408; 101, 397; 123, 147
 Straižys, V. 99, 152; 104, 215; 108, 373
 Strauss, F.M. 71, 319; 74, 280; 81, 344; 87, 58; 100, 189; 100, 331 (44, 337)
 Strazzulla, G. 81, 389 (39, 127); 88, 282 (41, 143); 91, 381 (42, 245); 93, 411; 96, 267; 100, 59; 103, L5; 104, 80; 118, 341; 120, 139; 123, 93
 Strittmatter, P.A. 88, L12; 93, 48
 Strobel, A. 122, 207; 127, 271
 Strom, R.G. 85, 36; 90, 283; 94, 313; 95, 250; 100, 220; 122, 305
 Strong, A.W. 105, 159; 107, 390; 115, 404; 128, 245
 Struble, M.F. 108, L7
 Stumpf, P. 78, 229; 84, 257; 87, 252 (41, 1); 101, 52; 125, L19
 Stute, U. 89, 204; 92, 323 (42, 299)
 Stutzki, J. 111, 201

- Subrahmanya, C.R. 89, 132; 107, 190
 Subramanian, S. 110, 324
 Sudy, A. 100, 326
 Suenram, R.D. 126, 393
 Sugimoto, D. 126, 207
 Sugiyama, T. 72, 309
 Sulentic, J.W. 88, 94; 120, 36; 121, 26
 Sullivan, III, W.T. 78, 217; 84, 181; 89, L3; 118, 33
 Sundman, A. 72, 379 (35, 327); 91, 59; 125, 391
 Sunyaev, R.A. 75, 214; 86, 121; 123, 171
 Surdej, A. 73, 369 (36, 283); 76, 368 (37, 467); 76, 368 (37, 483); 90, 116; 93, 285; 105, 242; 121, 329 (52, 203)
 Surdej, J. 73, 1; 73, 369 (36, 283); 76, 368 (37, 467); 76, 368 (37, 483); 78, 251 (38, 269); 85, 161; 89, 252 (41, 335); 90, 116; 93, 285; 96, 242; 103, 208 (46, 57); 104, 171 (46, 305); 105, 242; 109, 101; 114, 182; 115, 257; 116, 80; 117, 359; 121, 329 (52, 203); 127, 304; 128, 262 (54, 371)
 Sutantyo, W. 72, 120; 83, 252
 Sutton, E.C. 110, 324
 Suzuki, S. 88, 203; 88, 218
 Svanholt, H. 97, 192
 Svensson, B. 99, 404 (44, 317)
 Swanenburg, B.N. 94, 116
 Swarup, G. 107, 190
 Sweeney, P.J.P. 90, 318
 Sweigart, A.V. 71, 66
 Swings, J.P. 72, 374; 74, 85; 90, 116; 93, 285; 96, 242; 96, 406; 97, 415 (43, 331); 98, 112; 103, L3; 104, 171 (46, 305); 105, 242; 114, 182; 117, 359
 Sybesma, C.H.B. 111, 229
 Sylwester, J. 86, 268 (40, 323); 86, 268 (40, 335); 87, 55
 Szabados, L. 107, 415 (47, 541)
 Szebehely, V. 78, 349
 Tabara, H. 83, 384 (39, 379)
 Tähtinen, L. 118, 208 (51, 47)
 Takagi, S. 112, 11
 Takahashi, K. 117, 65
 Takalo, L.O. 109, 4
 Takano, T. 91, 335
 Takens, R.J. 113, 328
 Takeuti, M. 117, 352
 Talavera, A. 86, 271; 128, 74
 Tallqvist, S. 96, 316
 Tammann, G.A. 83, 275; 89, 95; 106, 380 (47, 335)
 Tandberg-Hanssen, E. 114, 192; 127, 337
 Tandon, S.N. 128, 255
 Tanzella-Nitti, G. 99, 403 (44, 241)
 Tanzi, E.G. 78, 226; 83, 270; 97, 415 (43, 353); 100, 68; 125, 117; 127, L17
 Tappere, E.J. 79, 128
 Tapping, K.F. 122, 177
 Taranova, O.G. 117, 209
 Tarengi, M. 73, 216; 78, 226; 83, 270; 84, 245; 96, 106; 97, 415 (43, 353); 100, 68; 109, 238; 113, 46; 119, 69; 125, 117
 Tarrab, I. 109, 285; 113, 57; 125, 308
 Tarsia, R. 90, 210; 127, 245
 Tarter, C.B. 71, 366
 Tarter, J.C. 76, 127
 Tavares, O.C. 85, 266 (40, 249); 85, 266 (40, 253); 86, 269 (40, 363); 86, 269 (40, 375); 87, 254 (41, 109); 101, 418 (45, 79)
 Tayler, R.J. 109, 166
 Taylor, B.G. 87, 276; 122, 124
 Taylor, D.B. 103, 288
 Taylor, J.B. 107, L1
 Tchountonov, G. 120, 237
 Teerikorpi, P. 98, 300; 98, 309; 109, 314; 118, 208 (51, 47)
 Teitelbaum, H. 97, 265
 Tempesti, P. 81, 389 (39, 115)
 Tennigkeit, J. 126, 352
 Tenorio-Tagle, G. 71, 59; 80, 110; 88, 58; 88, 61; 94, 338; 98, 85; 99, 305; 108, 25; 112, 1; 112, 104; 115, 207; 127, 313
 Teräsanta, H. 118, 208 (51, 47)
 Terrett, D.L. 89, 126
 Terzan, A. 71, 260; 103, 208 (46, 49); 112, 396 (49, 715)
 Terzian, Y. 75, 365; 96, 278
 Terzides, Ch.K. 99, 144; 122, 231
 Teske, R.G. 93, 228
 Testerman, L. 108, 201
 Testor, G. 71, 151; 84, 154; 111, L11; 113, 118; 118, 116
 Teuber, D.L. 80, 218
 Teulet, 95, 211 (43, 146)
 Texier, P. 75, 260 (36, 399); 99, 401 (44, 189); 115, 217 (50, 195)
 Thaddeus, P. 99, 239
 Thé, P.S. 84, 263; 87, 254 (41, 93); 89, 209; 91, 360; 100, 334 (44, 451); 103, 209 (46, 105); 106, 98; 117, 53; 117, 368; 120, 89; 121, 162 (52, 27); 124, 197; 125, 75
 Theil, U. 88, 284 (41, 271)
 Thévenin, F. 108, 195; 122, 261; 124, 331
 Thiele, U. 114, 357
 Thielemann, F.K. 74, 175; 99, 195; 123, 162; 125, 381
 Thielheim, K.O. 72, 263; 101, 409; 108, 206; 116, 1
 Thoburn, C. 125, 176 (53, 223)
 Thomas, G.E. 80, 227; 102, 415
 Thomas, H.C. 75, 281; 90, 54; 91, 175; 91, 181; 96, 142; 114, 77; 124, 206; 126, 45; 127, L15
 Thomas, J.A. 100, 116
 Thomas, R.N. 87, 36
 Thomasson, P. 73, 46; 100, 209; 106, 180 (46, 421)
 Thompson, D.J. 109, 352; 127, 220
 Thompson, R.W. 107, 11
 Thomsen, B. 72, 111
 Thonnat, M. 124, 236
 Thronson, H.A., Jr. 75, 236
 Thuillot, W. 76, L9; 79, 84; 127, 63
 Thum, C. 74, 133; 80, L3; 87, 269; 89, 173; 94, 80; 94, 231; 98, 295; 99, 400; 107, 368; 110, 181 (48, 345); 127, 383
 Tielens, A.G.G.M. 71, 272 (35, 153); 75, 326; 78, 100; 114, 245; 117, 132; 119, 177; 119, 324 (51, 389)
 Tiemann, E. 101, 238
 Tift, W.G. 73, 366 (36, 129)
 Tinbergen, J. 72, 378 (35, 279); 72, 379 (35, 325); 95, 215; 101, 223; 103, 422; 105, 53
 Tinsley, B.M. 89, 246
 Titarchuk, L.G. 86, 121
 Tiuri, M. 93, 121; 118, 208 (51, 47)
 Tjemkes, S. 126, 265
 Tjin A Djie, H.R.E. 84, 263; 89, 209; 91, 360; 100, 334 (44, 451); 106, 98
 Tkaczyk, W. 107, 376; 125, 121; 125, 126
 Tlamicha, A. 93, 121; 99, 401 (44, 165)
 Tobin, W. 125, 168
 Toelle, F. 81, 245
 Tofani, G. 89, 363
 Toft, S.C. 71, 178
 Tokdemir, F. 118, 114; 123, 17
 Tokunaga, A.T. 99, 108
 Tölle, F. 95, 143
 Tomas, M. 75, 260 (36, 399); 99, 401 (44, 189); 115, 217 (50, 195)
 Tomasi, P. 77, 93; 95, 208 (43, 1); 105, 176; 119, 163 (51, 179); 123, 347; 123, 359 (52, 411)
 Tomkin, J. 127, 277
 Tomley, L. 81, 95
 Tomozov, V.M. 79, 306
 Tondeur, F. 72, 88; 116, 183
 Tonwar, S.C. 81, L3
 Toor, A. 85, 184
 Topaktas, L. 101, 419 (45, 111); 103, 209 (46, 93); 112, 178 (49, 475); 119, 163 (51, 213); 119, 326 (51, 533)
 Torbett, M. 110, 43
 Torbett, M.V. 127, 345
 Tornambè, A. 82, 79; 96, 207
 Torra, J. 110, 23; 110, 95
 Torres, C. 93, 245; 118, 209 (51, 93); 119, 324 (51, 425)
 Torres-Peimbert, S. 80, 155
 Torricelli-Campioni, G. 97, 27; 105, L1
 Tosi, M. 81, 375; 96, 306; 102, 411; 128, 64
 Towlson, W.A. 82, 86; 126, 335
 Townes, C.H. 110, 324
 Tozzi, G.P. 126, 320
 Träger, F. 107, 161; 107, 166
 Traving, G. 85, 281; 105, 300
 Treffitz, E. 82, 256; 116, 224; 126, 415

- Trefzger, Ch.F. 95, 184; 117, 347
 Treumann, R. 93, 129; 108, 161
 Treves, A. 78, 226; 83, 270; 97, 415 (43, 353); 100, 68; 123, 355; 125, 117; 127, 117
 Treves, D. 77, 45; 95, 188; 110, 238
 Triay, R. 108, 256
 Trimble, V.L. 97, 403; 102, 142
 Trinchieri, G. 97, 128
 Troland, T.H. 118, 157
 Trotter, G. 79, 164; 93, 129; 108, 306; 111, 306; 119, 297
 Trueman, M.R.G. 85, 138
 Trujillo Lamas, M.L. 104, 93
 Trulsen, J. 91, 155
 Trümper, J. 94, 234; 107, 350
 Truran, J.W. 97, 391; 106, 109
 Trussoni, E. 79, 190; 125, 179
 Tsap, T.T. 88, 317
 Tscharnuter, W.M. 74, 288; 81, 347; 83, 118
 Tsioumis, A. 75, 1
 Tsuji, T. 99, 48; 122, 314
 Tsygan, A.I. 87, 224
 Tüg, H. 81, 388 (39, 67); 82, 195; 83, 383 (39, 305); 94, 16; 96, 174; 97, 417 (43, 427); 105, 395; 105, 400; 107, 311
 Tullio, G. di 74, 110
 Tully, J. 106, 362
 Turegano, J.A. 86, 46; 94, 91
 Turner, B.E. 76, 132 (37, 1)
 Turner, D.G. 76, 350
 Turnrose, B.E. 107, 11
 Turon, C. 110, 241
 Turon, P. 72, L4; 85, L1; 97, 1
 Turon Lacarrieu, C. 85, 311
 Turver, K.E. 126, 1
 Tutukov, A.V. 84, 123; 105, 342; 124, 89
 Twerenbold, D. 121, 164 (52, 161)
 Tylanda, R. 126, 299
 Ubertini, P. 106, 174; 108, 249; 127, 333
 Uehara, M. 95, 362
 Uiterwaal, G.M. 73, 369 (36, 265)
 Ukita, N. 112, 167; 121, 15
 Ulmschneider, P. 73, 190; 74, 229; 84, 93; 84, 191; 93, 178; 97, 101; 99, 173; 106, 9; 120, 141
 Ulrich, M.H. 103, L1
 Ulrich, R.K. 72, 177
 Underhill, A.B. 97, L9
 Ungerechts, H. 80, 325; 88, 259; 95, 143; 111, 201; 111, 339; 122, 164
 Ungerer, V. 121, 174
 Unno, W. 73, 314; 91, 129
 Urban, A. 87, 254 (41, 85)
 Urban, S. 121, L13
 Urbanik, M. 105, 21; 127, 177
 Urbarz, H.W. 79, 216; 99, 401 (44, 165)
 Urpin, V.A. 79, 60
 Urpo, S. 93, 121; 118, 208 (51, 47)
 Usowicz, J. 116, 158
 Ustimenko, B.Yu. 80, 170
 Uyama, K. 100, 116
 v.d. Stadt, H. 101, L1
 Vader, J.P. 100, 124; 113, 328
 Vadla, Č. 123, 249
 Vaghi, S. 73, 370 (36, 309)
 Vagnetti, F. 72, 204; 114, L1
 Vaiana, G.S. 98, 316
 Vainer, B.V. 98, 57
 Vaiopoulos, D.A. 71, L12
 Vakili, F. 80, L13; 101, 352; 103, 28; 120, 263
 Valbousquet, A. 77, 159; 86, 268 (40, 347); 89, 251 (41, 295); 95, 208 (43, 23); 102, 279 (45, 181)
 Valentijn, E.A. 73, 54; 78, 362; 78, 367; 80, 201; 80, 329 (38, 319); 84, 245; 89, 234; 102, 53; 111, 50; 114, 208; 118, 123; 125, 217; 125, 223
 Valiron, P. 78, 177; 106, 197
 Vallée, J.P. 77, 183; 80, 186; 86, 251; 92, 324 (42, 319); 107, 416 (47, 601); 118, 210 (51, 127); 121, 163 (52, 125); 124, 147
 Valsecchi, G.B. 94, 226; 99, 262; 115, 327; 116, 201; 127, 373
 Valtaoja, E. 111, 213; 118, 208 (51, 47)
 Valtier, J.-C. 72, 313; 73, 329; 97, 415 (43, 359); 101, 259; 118, 294; 122, 193
 Valtonen, M. 118, 208 (51, 47)
 van Albada, G.D. 82, 395 (39, 283); 90, 123; 108, 76; 115, 263
 van Albada, T.S. 75, L11
 van Albada-van Dien, E. 121, 329 (52, 193)
 van Amerongen, S. 122, 79; 124, 294
 van Ardenne, A. 77, 1
 Van Assche, W. 109, 166
 van Ballegooijen, A.A. 106, 43; 106, 58; 113, 99; 113, 350; 118, 275
 Vanbeveren, D. 72, 378 (35, 301); 73, 19; 77, 295; 80, 242; 81, 228; 82, 73; 86, 21; 87, 77; 88, 230; 95, 14; 95, 321; 105, 260; 113, 205; 115, 65; 115, 69; 119, 239; 124, 71
 van Breugel, W.J.M. 79, L26; 81, 265; 81, 275; 88, 248; 96, 310; 96, 332; 97, 413; 105, 278; 110, 225; 112, 180 (49, 529)
 van Bueren, H.G. 99, 7
 van den Bergh, S. 86, 155; 88, 360; 103, 208 (46, 79)
 Vanden Bout, P.A. 118, 337
 van den Heuvel, E.P.J. 72, 120; 76, 245; 81, L7; 85, 119; 86, L10; 94, 327; 97, 415 (43, 353); 103, 209 (46, 89); 108, 143; 113, 328
 van den Horn, L.J. 125, 93
 van den Oord, G.H.J. 107, 320; 109, 289
 van der Bij, M. 111, 372
 van der Hucht, K.A. 78, 251 (38, 279); 82, 14
 van der Hulst, J.M. 71, 131; 78, 82; 89, 345; 115, 263; 115, 293; 126, 341
 van der Klis, M. 73, 90; 88, 8; 95, L5; 97, 134; 101, 184; 101, 299; 106, 339; 114, 422 (50, 129); 116, 232; 121, 119; 126, 265
 van der Kruit, P.C. 77, 371 (38, 15); 79, 281; 95, 105; 95, 116; 99, 298; 105, 351; 110, 61; 110, 79; 115, 293
 Van der Laan, H. 77, 183
 van der Linden, T.J. 86, L10; 103, 209 (46, 89); 118, 285
 van der Mee, C.V.M. 128, 1
 van der Post, P. 103, 331
 van der Raay, H.B. 91, L9
 Vanderriest, C. 76, 297; 83, 384 (39, 395); 106, L1; 110, L11
 van der Wal, P.B. 86, 248
 van der Woerd, H. 111, 372; 113, 27
 van Dessel, E.L. 73, 19; 93, 219; 104, 150
 Van Diest, H. 83, 378
 Van Driel, W. 99, 204 (44, 83)
 Van Duinen, R.J. 77, 189; 85, 221; 91, L1; 94, 377; 106, 381 (47, 341); 112, 178 (49, 427); 115, 308
 van Genderen, A.M. 73, 183; 73, 369 (36, 265); 78, 249 (38, 151); 80, 330 (38, 381); 82, 394 (39, 199); 88, 77; 93, L5; 96, 78; 96, 82; 97, 79; 99, L1; 99, 204 (44, 83); 99, 386; 100, 175; 101, 101; 101, 289; 105, 250; 107, 416 (47, 591); 111, 171; 111, 185; 112, 61; 115, 79; 117, 53; 117, 368; 118, 289; 119, 192; 119, 265; 121, 35; 123, 359 (52, 423); 124, 197; 124, 223; 126, 94; 126, 223 (53, 419)
 Van Gent, R.H. 110, 183 (48, 457)
 Vangioni-Flam, E. 82, 234; 90, 73; 91, 49
 van Gorkom, J.H. 73, L17; 76, 1; 82, L1; 89, 150; 94, 259; 112, 120; 115, 164; 119, L3; 122, 143; 128, 325
 van Groningen, E. 90, L7; 101, 101; 126, 363
 van Grunsven, T.F.J. 91, 7; 91, 17
 Van Hamme, W. 105, 389; 107, 397; 107, 409; 116, 27
 Vanhollebeke, J. 75, 260 (36, 399); 99, 401 (44, 189)
 VanHoosier, M.E. 92, L7; 97, 394
 Van Horn, H.M. 94, 109; 107, L3
 Van Houten, C.J. 71, 273 (35, 223); 97, 46
 Van Houten-Groeneveld, I. 71, 273 (35, 223); 98, 203
 Van Hoven, G. 97, 232
 van Leer, B. 108, 76

- van Leeuwen, F. 76, 257 (37, 333); 86, L10; 103, 209 (46, 89); 107, 416 (47, 591)
- van Moorsel, G.A. 107, 66; 125, 176 (53, 271); 127, 423 (54, 1); 127, 423 (54, 19)
- van Nieuwkoop, J. 122, 177
- van Paradijs, J. 72, 82; 86, L10; 101, 174; 103, 140; 103, 209 (46, 89); 106, 339; 107, 51; 110, 316; 111, 372; 113, 27; 122, 79; 124, 294; 125, L16; 126, 265
- van Rensbergen, W. 77, 286; 87, 369; 115, 69
- van Someren Greve, H.W. 98, 251
- Van't Veer, C. 92, 132; 103, 145
- Van't Veer, F. 80, 287; 94, 350; 95, 395 (43, 257); 98, 213
- van't Veer-Menneret, C. 92, 13; 107, 416 (47, 595)
- van Vliet, A.H.F. 84, 212; 101, L1
- van Weert, C.G. 125, 93
- van Woerden, H. 73, 247; 74, 100; 76, 230; 89, 345; 94, L25; 117, 172 (50, 451)
- Vardavas, I.M. 98, 230; 98, 241; 98, 246
- Vasilevskis, S. 76, 257 (37, 333)
- Vauclair, G. 80, 79; 83, L13; 94, 206; 95, L9; 100, 113; 102, 375; 103, L17; 106, 67; 109, 7; 113, L13; 121, L23; 123, L11; 127, 25
- Vauclair, S. 80, 79; 101, 16
- Vaughan, A.H. 96, 401
- Vautherin, D. 112, 268
- Vaz, L.P.R. 120, 278
- Vázquez, M. 93, 67; 96, 17; 106, 261; 111, 266; 117, 170
- Veccia-Scavalli, L. 97, 169; 99, L12
- Vedenicheva, I.P. 76, 124
- Vedrenne, G. 79, L24; 94, 214; 100, L1; 103, 428; 109, L9; 126, 400
- Veillet, C. 89, 342; 98, 218; 102, L5; 112, 277; 118, 211
- Velden, L. 83, 384 (39, 337); 102, L21; 113, 340; 120, 63
- Velt, C.F. 103, 422
- Veltri, P. 73, 292; 83, 26
- Velusamy, T. 94, 313; 108, 188
- Venis, T.E. 82, 86
- Venkatakrishna, K.L. 107, 190
- Ventura, J. 111, 242; 118, 66; 126, 251
- Verbunt, F. 86, L10; 95, L11; 100, L7; 103, 209 (46, 89); 127, 161
- Vergani, F. 123, 355
- Verges, J. 119, 164 (51, 257)
- Verhulst, F. 101, 134
- Vermue, J. 81, 223; 102, 257
- Vernin, J. 79, 184; 99, 232
- Véron, M.P. 75, 259 (36, 331); 78, 125; 85, 265 (40, 191); 87, 245; 95, 393 (43, 195); 97, 71; 98, 34; 100, 12; 102, 116
- Véron, P. 75, 259 (36, 331); 78, 46; 78, 125; 85, 265 (40, 191); 87, 245; 95, 393 (43, 195); 97, 71; 98, 34; 102, 116; 105, 405; 113, 46; 116, 60; 119, 69; 125, 175 (53, 219)
- Véron-Cetty, M.P. 105, 405; 113, 46; 119, 69; 125, 175 (53, 219)
- Verschoor, J.N. 126, 223 (53, 419)
- Vettolani, G. 96, 58; 110, 183 (48, 453); 113, 15; 126, 221 (53, 373)
- Vial, J.C. 89, L8; 93, 415; 100, 205; 103, 160; 111, 136; 115, 367; 121, 155; 127, 337
- Viala, Y.P. 73, 174; 117, 172 (50, 505)
- Vialetto, G. 108, 249
- Viallefond, F. 82, 207; 83, 22; 91, 269; 104, 127; 115, 373; 119, 185
- Vidal, J.L. 73, 97; 79, 93; 84, 268 (40, 33); 93, 53
- Vidal-Madjar, A. 87, L12; 90, L13; 104, 10; 120, 58; 124, 99
- Vieira, E.R. 71, 319; 103, 208 (46, 41)
- Vieira, G.G. 75, 260 (36, 407); 85, 266 (40, 251); 91, 262 (42, 81); 103, 210 (46, 131); 104, 169 (46, 463); 106, 180 (46, 371); 107, 413 (47, 463); 127, 424 (54, 47)
- Vigier, J.P. 121, 26
- Vignato, A. 77, 45; 95, 188; 110, 238
- Vigneau, J. 72, 380 (35, 353); 114, 422 (50, 119); 117, 171 (50, 291)
- Vigotti, M. 72, 380 (35, 371); 86, 50; 99, 403 (44, 241); 127, 29
- Vigouroux, G. 77, 369; 111, 211 (49, 105); 111, 211 (49, 107); 126, 221 (53, 361)
- Vigroux, L. 78, 200; 98, 1; 98, 119
- Vilhu, O. 109, 17; 110, 351; 119, 47; 127, 5
- Villa, G. 117, 38
- Villing, W. 101, 150
- Vilmer, N. 108, 161; 108, 306; 119, 297
- Viner, M.R. 80, 186; 111, 358; 128, 434
- Viotti, R. 71, L9; 78, 287; 90, 290; 112, 179 (49, 511); 119, 285; 122, 339; 126, 407; 126, 427
- Virdefors, B. 73, 370 (36, 317); 86, 268 (40, 307); 115, 347
- Visser, H.C.D. 88, 149; 88, 159
- Visvanathan, N. 79, 329; 100, L20
- Viswanath, P.R. 81, L3
- Vittone, A. 79, 247; 85, 14; 87, 31; 88, 282 (41, 143); 94, 251; 100, 59; 111, 212 (49, 129); 122, 343; 123, 360 (52, 443); 124, 154 (53, 109)
- Vittorio, N. 86, 212; 97, 169; 99, L12; 107, 172; 117, 365; 123, 118
- Vivekanand, M. 113, L3; 122, 45
- Vladilo, G. 121, 164 (52, 135)
- Vlahos, L. 108, 188; 112, 377
- Voges, W. 94, 234; 107, 350
- Vogt, N. 75, 262 (36, 477); 77, 7; 85, 106; 86, 269 (40, 371); 87, 349; 88, 66; 89, 223; 91, 25; 94, L29; 96, 120; 97, 185; 98, 27; 102, 337; 103, 207 (46, 7); 110, 182 (48, 383); 110, 281; 113, 76; 114, L11; 117, 283; 118, 95; 118, 325; 120, 278; 123, 48; 124, 151 (53, 21); 127, 244; 128, 29
- Voli, M. 85, 269; 94, 175
- Völk, H.J. 85, 316; 116, 191; 119, 101; 122, 129
- Volonté, S. 118, 147
- von der Heide, K. 72, 324; 79, 22; 89, 220
- von der Lühse, O. 101, 277; 119, 85
- von Uexküll, M. 102, 147; 113, 129; 119, 124; 123, 263
- Vorpahl, J. 101, 150
- Vreux, J.M. 75, 93; 76, 221; 85, L7; 92, 242; 113, L10
- Vu, D.T. 94, 140
- Vujnović, V. 123, 249
- Wade, J.D. 82, 172
- Wadiak, E.J. 123, L1
- Waelkens, C. 91, 276; 97, 274; 108, 51; 119, 279; 121, 45; 121, 162 (52, 1); 121, 162 (52, 13); 121, 162 (52, 21); 128, 262 (54, 371)
- Wagenblast, R. 120, 6
- Wagner, W.J. 111, 306; 116, 217; 120, 136
- Wahlgren, G. 123, 326
- Wai-Yuen, Law 102, 178
- Waldhausen, S. 91, 380 (42, 179)
- Waldner, F. 127, 169
- Waldthausen, H. 73, 369 (36, 237); 89, 252 (41, 339)
- Walker, E.N. 73, 365 (36, 61); 128, 394
- Walker, G.A.H. 106, 180 (46, 375); 115, 145
- Walker, H.J. 97, 291; 100, 332 (44, 349)
- Walker, M.F. 104, 24
- Walker, W.S.G. 118, 325
- Wall, J.V. 87, 252 (41, 21)
- Wallerstein, G. 104, 72; 105, 219; 109, 136
- Wallis, J. 78, 41
- Wallis, M.K. 78, 41; 98, 45; 121, 10
- Walmsley, C.M. 72, 215; 75, 34; 80, 325; 81, 245; 82, 41; 88, 259; 89, 173; 91, 36; 93, 79; 95, 143; 96, 278; 98, L4; 102, 287; 103, 197; 111, 339; 115, 185; 122, 164; 127, L19; 127, 388
- Walmsley, M. 125, L19; 126, 1
- Walsh, J.R. 123, 101
- Walter, G. 123, 279
- Walter, H.G. 86, 1; 89, 198; 104, 171 (46, 277); 111, 357; 115, 197
- Walter, K. 72, 378 (35, 281); 76, 369 (37, 493); 78, 249 (38, 161); 80, 27; 92, 86; 101, 369; 104, 171 (46, 263); 109, 107; 128, 391
- Waltman, E. 101, 49
- Wampler, E.J. 114, 165; 122, 54; 124, 154 (53, 97)

- Wamsteker, W. 76, L14; 76, 226; 84, 263; 85, L1; 93, 285; 95, 210 (43, 127); 96, 120; 97, 1; 97, 329; 101, 417 (45, 5); 102, 225; 106, 105; 107, 240; 114, 422 (50, 141); 118, 301; 119, 14
- Wandel, A. 72, 367
- Wang, Y.-M. 74, 253; 93, 255; 102, 36; 102, 97; 107, 222; 112, 24; 113, 113; 118, 267
- Wang, Z.R. 126, 357
- Wannier, P.G. 76, 140
- Ward, L. 106, 327
- Ward, R.A. 97, 157; 103, 189
- Wargau, W. 98, 27; 102, 337; 110, 246; 110, 281; 113, 76; 117, 283; 125, L1; 126, 357
- Wassermann, C. 107, 283
- Watanabe, T. 111, 333
- Watkinson, A. 78, 75
- Watson, R.D. 89, 252 (41, 397)
- Watt, G.D. 84, 212; 116, 130; 116, 293
- Wdowczyk, J. 84, 44
- Webb, G.M. 124, 163; 127, 97
- Webbink, R.F. 106, 109
- Weber, T.A. 95, 5
- Webster, B.L. 73, 368 (36, 169)
- Webster, W.J., Jr. 120, 322
- Weekes, T.C. 104, L4; 121, 232
- Wegner, G. 94, 272; 97, 418 (43, 473); 102, 223; 102, 331; 128, 258
- Wehlau, W.H. 106, 7
- Wehmeyer, R. 78, 39
- Wehrse, R. 71, 289; 83, 184; 85, L15; 86, 105; 86, 139; 108, 42; 109, 10; 110, 18; 122, 297; 123, 67
- Weidemann, V. 76, 262; 81, 145; 83, L13; 85, 208; 94, 206; 95, L9; 100, 113; 108, 406; 109, 7; 113, L13; 116, 147; 121, 77; 123, L11
- Weigelt, G. 121, 137; 125, 246
- Weigert, A. 80, 48; 107, 283; 112, 281; 116, 348; 127, 309
- Weiler, K.W. 75, 259 (36, 359); 82, 389; 84, 271; 90, 269; 91, 41; 96, 316; 96, 412; 97, 388; 101, 418 (45, 61)
- Weinberger, R. 84, 270 (40, 123); 85, 356; 87, L5; 95, 209 (43, 75); 100, 66
- Weisberg, J.M. 77, 204; 88, 84; 94, L6; 101, 332
- Weisheit, J.C. 71, 366
- Weiss, A. 127, 411
- Weiss, G. 76, 370 (37, 575)
- Weiss, K. 104, 42
- Weiss, N.O. 76, 35
- Weiss, W.W. 71, 271 (35, 83); 81, 59; 81, 323; 90, 18; 103, 210 (46, 151); 106, 379 (47, 221); 128, 152
- Weissman, P.R. 85, 191; 118, 90
- Weiss-Wrana, K. 126, 240
- Weliachew, L. 84, 85
- Welin, G. 79, 334
- Wellington, K.J. 127, 361
- Wells, D.C. 100, 332 (44, 363)
- Wells, J. 85, L4
- Welsh, B.Y. 126, 335
- Welter, G.L. 102, 97; 105, 237; 113, 113; 113, 277
- Wendker, H.J. 73, L21; 89, 180; 89, 239; 92, L5; 93, 48; 96, 102; 101, 39; 113, 170; 116, L1; 121, 69; 124, 116
- Wendlandt, H.-U. 111, 212 (49, 143)
- Wentzel, D.G. 76, 20; 80, 268; 94, 100; 100, 20
- Werner, K. 103, 108
- Wesemael, F. 72, 104; 77, 354
- Wesslink, T.J.H. 99, 204 (44, 83)
- Wesselius, P.R. 72, 82; 74, L15; 77, 189; 78, 251 (38, 279); 79, 115; 85, 221; 91, 360; 102, 237; 106, 381 (47, 341); 109, 182; 112, 178 (49, 427)
- Wesson, P.S. 76, 200; 80, 296; 90, 1; 102, 45; 119, 145; 119, 313
- West, R.M. 71, 262; 76, 130; 77, 372 (38, 69); 81, 388 (39, 35); 82, 394 (39, 173); 86, 1; 88, 350; 90, 366; 95, 1; 97, 415 (43, 307); 100, 331 (44, 329); 103, 208 (46, 57); 103, 319; 104, 171 (46, 277); 104, 172 (46, 311); 106, 53; 110, 198; 111, 210 (49, 73); 111, 357; 112, 180 (49, 577); 121, L11
- Westerhout, G. 111, 212 (49, 137); 111, 212 (49, 143)
- Westerlund, B.E. 71, 270 (35, 55); 72, 277; 95, 395 (43, 267); 105, 284; 118, L5; 123, 159
- Westin, B.A.M. 81, 74; 89, L11
- Westin, T.N.G. 112, 180 (49, 561)
- Wheeler, J.C. 82, 152
- White, G. 82, 381
- White, G.J. 84, 212; 91, 257; 116, 130; 116, 293
- White, N.J. 78, 373; 83, 79
- White, R.E. 92, 323 (42, 289)
- Whitehurst, R.N. 85, 266 (40, 215)
- Whitlock, P.A. 93, 219; 97, 415 (43, 353)
- Whitmire, D.P. 106, L9; 117, L7
- Whitney, A.R. 86, 364
- Whitney, C.A. 119, 315; 119, 325 (51, 443); 119, 325 (51, 463)
- Whittet, D.C.B. 72, 370; 123, 301
- Wiedemann, D. 114, 421 (50, 93)
- Wiegandt, R. 82, 177; 82, 238; 89, 67; 105, 326; 106, 240
- Wiehl, H.J. 82, 93; 92, 260
- Wiehr, E. 73, L19; 75, 263; 82, 157; 85, 326; 86, 245; 91, 377; 95, 54; 95, 229; 103, 211
- Wielebinski, R. 71, L15; 72, 229; 73, 369 (36, 237); 74, 93; 77, 25; 89, 204; 89, 252 (41, 339); 93, 85; 95, 391; 95, 393 (43, 155); 97, 388; 98, 260; 105, 188; 106, 112; 108, 176; 109, 340; 117, 141; 117, 332; 124, 326; 127, 177
- Wiemer, H.-J. 112, 116
- Wiertz, M.J.J. 121, 35
- Wiesmeier, A. 104, 207
- Wiita, P.J. 88, 23
- Wijnbergen, J.J. 76, 259; 83, 22; 83, 140; 94, 265
- Wikan, A. 91, 155
- Wildeman, K.J. 112, 178 (49, 427)
- Wilkins, D. 98, 30
- Willems, F. 115, 213
- Williams, I.P. 77, 152; 91, 85
- Williams, J.G. 125, 150
- Williams, P.M. 116, 293; 123, 301
- Williamson, F. 115, 167
- Willis, A.G. 71, 253; 71, 272 (35, 153); 73, 354; 73, 368 (36, 213); 76, 65; 76, 258 (37, 397); 77, 86; 85, 36; 85, 55; 95, 250; 96, 332; 96, 393; 100, 220
- Willis, A.J. 83, 270; 85, 119; 101, 184; 106, 339; 106, 379 (47, 257); 128, 261 (54, 229)
- Wills, R.D. 94, 116; 107, 390
- Willson, R.F. 95, 386; 96, 230; 127, 135
- Wilson, A.S. 77, 183; 92, 324 (42, 319); 101, 419 (45, 99); 107, 416 (47, 601); 115, 217 (50, 217)
- Wilson, P.R. 71, 9; 87, 121
- Wilson, R. 83, 270; 85, 119; 85, 272; 93, 219
- Wilson, R.E. 82, 225; 91, 380 (42, 195); 95, 328; 99, 43
- Wilson, R.H. Jr. 71, 273 (35, 193); 82, 394 (39, 197); 95, 210 (43, 99); 114, 421 (50, 115)
- Wilson, R.M. 74, 129; 77, 372 (38, 79); 80, 218
- Wilson, R.W. 78, L1; 88, L1; 107, 107
- Wilson, T.L. 71, 205; 71, 275; 73, L10; 73, L13; 73, 253; 76, 86; 77, L3; 79, 245; 79, 312; 82, 41; 84, L1; 86, 269 (40, 379); 91, L11; 91, 36; 91, 379 (42, 163); 96, 202; 98, L4; 99, 270; 101, 72; 102, 287; 104, 288; 106, 167; 107, L10; 109, 344; 110, L20; 112, 394 (49, 607); 115, 185; 117, 145; 118, 337; 119, 139; 124, 23; 124, 322; 127, L19; 127, 211; 127, 388; 128, 279
- Wilson, W. 83, 297
- Wilson, W.E. 71, 205; 100, 209; 106, 181 (47, 1); 109, 145
- Windhorst, R.A. 97, 79; 99, 204 (44, 83)
- Wing, R.F. 111, 120
- Wink, J. 80, L3; 86, 269 (40, 379); 99, 400
- Wink, J.E. 108, 227; 120, 322; 127, 211
- Winkler, C. 84, 50; 115, 115
- Winkler, K.-H.A. 83, 118; 113, 285
- Winnberg, A. 71, 273 (35, 179); 73, 368 (36, 193); 75, 351; 78, 275; 80, 260; 83, 263; 90, 176; 91, 264 (42, 119); 93, 79; 95, 156; 95, 171; 102, 287; 106, 180 (46, 389); 108, 412; 115, 223; 128, 230

- Winnewisser, G. 72, 215; 75, 268; 81, 245; 88, 259; 95, 143; 109, 141; 111, 201; 111, 339; 121, L13
- Winnewisser, M. 109, 141
- Wischniewski, E. 96, 102
- Wischnjewsky, M. 118, 209 (51, 93)
- Wisse, P.N.J. 99, 403 (44, 273)
- Wisshak, K. 105, 270
- Witomsky, P. 111, 104
- Witt, A.N. 76, 257 (37, 351)
- Witt, N. 73, 260; 73, 272; 95, 80
- Wittels, J.J. 86, 364
- Wittmann, A. 73, 129; 83, 312; 85, 326; 99, 90
- Witzel, A. 74, 138; 79, 268; 81, 235; 85, 329; 88, L12; 89, 169; 91, 259; 95, 285; 95, 393 (43, 195); 97, L1; 100, 7; 101, 49; 102, 280 (45, 367); 108, 157; 117, 60; 119, 80
- Witzigmann, S. 77, 61; 89, 227
- Wizinowich, P. 111, 117
- Wlérick, G. 72, 277; 102, L17; 105, 284; 110, L11
- Wöhl, H. 91, 380 (42, 209); 92, 111; 93, 67; 93, 241; 98, 422; 106, 261; 109, 77; 111, 266; 114, 357; 117, 170; 122, 69; 123, 29
- Wolf, B.E. 71, 270 (35, 69); 75, 164; 75, 261 (36, 423); 78, 15; 86, 113; 88, 15; 89, 282; 90, 184; 90, 338; 97, 101; 98, 27; 99, 351; 102, 337; 103, 94; 103, 427; 105, 313; 107, 412 (47, 419); 108, 102; 110, 246; 110, 272; 112, 111; 113, 76; 120, 287; 127, 49; 127, 93
- Wolf, J. 119, 294
- Wolfendale, A.W. 84, 44; 84, 128; 92, 175; 100, L26; 103, 19; 116, 95; 126, 22
- Wolfsberg, M. 74, 369
- Wolszczan, A. 86, 7; 90, 58; 100, 91; 116, 158
- Woltjer, L. 76, L1
- Woo, R. 103, 415
- Wood, H.J. 81, 323; 126, 80
- Wood, J. 95, 394 (43, 209)
- Wooden II, W.H. 106, 179 (46, 347)
- Woodgate, B.E. 115, 367; 119, 233
- Woodsworth, A.W. 84, 379; 122, 322
- Woo Jong-Ok 126, 222 (53, 407)
- Worden, S.P. 71, 92
- Worswick, S.P. 72, 31
- Woszczyk, A. 93, 1
- Wouterloot, J.G.A. 71, 270 (35, 1); 75, 259 (36, 323); 81, L11; 86, 254; 90, 297; 106, 171; 111, 358
- Wragg, M.A. 113, 269
- Wramdemark, S. 86, 64; 87, 253 (41, 33); 95, 210 (43, 103); 99, 204 (44, 115)
- Wright, A.E. 81, 83
- Wright, E.L. 76, 86
- Wright, G.A.E. 93, 54; 101, 356; 109, 279
- Wright, M.C.H. 76, 127
- Wroblewski, H. 93, 245; 118, 209 (51, 93); 119, 324 (51, 425)
- Wu, S.T. 114, 192
- Wuensch, J. 127, 413
- Wujec, T. 77, 373 (38, 119)
- Wunner, G. 89, 241; 94, 194; 95, 204; 100, 164; 115, 90; 117, 156
- Wyse, R.F.G. 120, 165
- Xanthopoulos, B.C. 122, 251
- Xuejun, W. 120, 15
- Yabushita, S. 85, 77
- Yahel, R.Z. 78, 136; 90, 26; 109, 1
- Yahil, A. 72, 367
- Yamada, K. 121, L13
- Yamagami, T. 100, 116
- Yamamoto, T. 107, 97; 109, 326; 122, 171
- Yang, S. 106, 180 (46, 375)
- Yavuz, I. 73, 364 (36, 25)
- Yerle, R. 73, 346; 73, 352; 100, L23; 103, 428
- Yilmaz, N. 113, 250
- Yokoi, K. 77, 210; 117, 65
- York, D.G. 120, 58
- Yorke, H.W. 80, 110; 80, 308; 81, 347; 83, 118; 85, 215; 86, 286; 98, 125; 102, L23; 104, 198; 108, 25; 112, 1; 112, 104; 127, 313
- Yoshii, Y. 97, 280; 98, 186; 104, 142
- Young, J.W. 115, 257; 123, 326
- Yu, Y. 126, 387
- Yudin, B.F. 117, 209
- Zagouras, C.G. 77, 371 (38, 1)
- Zahn, J.-P. 87, 315
- Zaki Ewiss, M.A. 121, 327
- Zambon, M. 76, 370 (37, 551); 76, 370 (37, 559)
- Zamorani, G. 75, 303; 118, L1
- Zanelli, C. 99, 401 (44, 165)
- Zaninetti, L. 79, 190; 125, 179
- Zanzu, T. 87, 1
- Zappalà, V. 71, 273 (35, 213); 71, 273 (35, 223); 73, 364 (36, 1); 73, 370 (36, 309); 82, 393 (39, 163); 83, 249; 84, 269 (40, 119); 85, 267 (40, 257); 87, 253 (41, 29); 88, 282 (41, 183); 91, 1; 91, 263 (42, 85); 99, 203 (44, 43); 100, 326; 101, 419 (45, 93); 104, 148; 104, 159; 107, 412 (47, 447); 108, 197; 110, 182 (48, 449); 114, 420 (50, 23); 114, 421 (50, 421); 115, 218 (50, 277); 118, 208 (51, 37); 119, 324 (51, 385); 123, 326
- Zdarsky, F. 115, 138; 117, 172 (50, 481)
- Zdunik, L. 126, 121
- Zdziarski, A.A. 110, L7
- Zealey, W.J. 77, 371 (38, 39); 123, 301
- Zeau, Y. 84, 148
- Zechenko, V.M. 100, L1
- Zeidler-K.T., E.M. 113, L13; 113, 173; 116, 147
- Zeippen, C.J. 97, 417 (43, 455)
- Zekl, H. 76, 258 (37, 465); 103, 342; 108, 380; 113, 178
- Zeldovich, Ya.B. 80, 104
- Zenchenko, V.M. 79, L24; 100, L1; 103, 428; 126, 400
- Zentelis, N. 126, 223 (53, 445)
- Zentsova, A.S. 89, 1
- Zerull, R. 104, 42
- Zheleznyakov, V.V. 95, 86
- Zhong-yu, Q. 128, 262 (54, 309)
- Zickgraf, F.-J. 120, 287
- Zieba, S. 105, 21
- Ziegert, W. 125, 381
- Zikides, M.K. 88, 298; 90, 198
- Zimmermann, H.U. 88, 309; 115, 167
- Zimmermann, P. 103, 108; 108, 127; 112, 337
- Zirin, H. 94, 67
- Zisk, S.H. 100, L10
- Zitelli, V. 72, 380 (35, 391); 82, 393 (39, 129); 85, 80; 90, L10; 119, 163 (51, 179); 123, 359 (52, 411); 127, 29
- Ziurys, L.M. 77, L3; 98, L4; 104, 288
- Zlobec, P. 79, 216; 99, 401 (44, 165); 109, 305
- Zlotnik, E. Ya. 101, 250
- Zodi, A.M. 123, 10
- Zorec, J. 126, L8; 126, 192; 126, 205
- Zotti, G. de 75, 322
- Žugžda, Y.D. 112, 16; 120, 185
- Zuiderwijk, E.J. 76, 245; 87, 245; 97, 71; 98, 34; 102, 116; 105, 254; 106, 339; 128, 394
- Zukowski, E. 121, 332 (52, 317)
- zu Putlitz, G. 95, 278; 107, 161; 107, 166
- Zurek, W.H. 91, 90
- Zvereva, A.M. 116, 312
- Zwaan, C. 90, 239; 100, L7; 101, 26; 101, 223; 110, 30; 117, 21

The first part of the paper discusses the importance of the study of the history of the world, and the second part discusses the importance of the study of the history of the world.

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1979-1983 Subject Index

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A Stars

High Resolution Profiles in A Type Stars. The Ca II K Line in Sirius

Griffin, R., Griffin, R. **71**, 36

High Resolution Profiles in A-type Stars. The Ca II K Lines in Sirius—Comments

Czarny, J., Felenbok, P. **71**, 38

Charge Transfer $C + H^+ = C^+ + H$ and the C I λ 1101 Absorption Edge in A Stars

Che, A., Baschek, B. **86**, L7

HR 4453: An Anomalous Bright UV Source?

Polidan, R.S., Oegerle, W.R., Margon, B. **92**, 212

Search for Chromospheres in A-type Stars

Dravins, D. **96**, 64

Comparison Between the Observed Intrinsic Colour $(b-y)_0$ and the Calculated Theoretical Index $(b-y)$ for A-type Stars

Burkhardt, C., Van't Veer, C., Faraggiana, R. **103**, 145

The Variable Shell Star HR 5999. VI. Strong Chromospheric and Transition Region Emission Lines in the Ultraviolet Spectrum of a Herbig Ae Star

Tjin A Djie, H.R.E., Thé, P.S., Hack, M., Selvelli, P.L. **106**, 98

On the Search for Transition Zone Lines in Late A Type Stars

Crivellari, L., Praderie, F. **107**, 75

Contribution to the Study of Composite Spectra. II. A, Am, Ap Spectroscopic Binaries (Text in French)

Ginestet, N., Jaschek, M., Carquillat, J.M., Pédoussaut, A. **107**, 215

UV Photometric Data on Standard A, F and Am Stars Observed by S2/68

Van't Veer-Menneret, C., Faraggiana, R., Burkhardt, C., Oberto, Y. **107**, 416; **47**, 595

Observed and Computed UV Spectral Distribution of A and F Stars. Determination of T_e and $\log g$

Malagnini, M.L., Faraggiana, R., Morossi, C., Crivellari, L. **114**, 170

The definition of T Tauri and Herbig Ae/Be stars

Bastian, U., Finkenzeller, U., Jaschek, C., Jaschek, M. **126**, 438

Superionization in the A0 V star HD 119921

Molaro, P., Morossi, C., Ramella, M., Franco, M. **127**, L3

The λ Boo stars: a reappraisal

Hauck, B., Slettebak, A. **127**, 231

A search for periodic variability of normal A-type stars

Engberg, M. **128**, 260; **54**, 203

Aberration

The Rigorous Treatment of Stellar Aberration and Doppler Shift, and the Barycentric Motion of the Earth

Stumpff, P. **78**, 229

On the Relationship between Classical and Relativistic Theory of Stellar Aberration

Stumpff, P. **84**, 257

Two Self-consistent Fortran Subroutines for the Computation of the Earth's Motion

Stumpff, P. **87**, 252; **41**, 1

Absolute Energy Distribution

The Monochromatic Flux of 14 Southern Standard Stars from 3200 Å to 8800 Å

Tüg, H. **81**, 388; **39**, 67

Measurements of the Energy Distributions of Southern Standard Stars from 3200 Å to 8800 Å

Tüg, H. **82**, 195

Spectrophotometry of Paschen and Balmer Lines in PKS 0312-77 and 3C 109

Kollatschny, W., Fricke, K.J. **100**, L4

The Sun Among the Stars. VI. The Solar Analog HD 44594

Hardorp, J., Tüg, H., Schmidt-Kaler, T. **107**, 311

Determination of effective temperatures for hot stars from integrated fluxes

Tobin, W. **125**, 168

Absolute Magnitudes

The Absolute Magnitude of the Hg-Mn Stars

Jaschek, M., Jaschek, C., Grenier, S., Gómez, A.E., Heck, A. **81**, 142

Comparison Between Geneva Photometric Boxes and MK Spectral Types Through Trigonometric Parallaxes

Crézé, M., Turon, Lacarrieu, C., Golay, M., Mandwewala, N. **85**, 311

The Fundamental Physical Parameters of Main-sequence and Near Main-sequence B Type Stars as Derived from *uvby*, β Photometry

Sinnerstad, U. **86**, 270; **40**, 395

Luminosity of the Mira Variables

Celis, L.S. **89**, 145

The Absolute Magnitude of the Am Stars

Gómez, A.E., Grenier, S., Jaschek, M., Jaschek, C., Heck, A. **93**, 155

Absolute Magnitudes of Nearby Bright Stars

Shallis, M.J. **97**, 203

The Upper Luminosity Boundary of O Stars

Chiosi, C., Greggio, L. **98**, 336

The Absolute Magnitudes of the Ap Stars

Grenier, S., Jaschek, M., Gomez, A.E., Jaschek, C., Heck, A. **100**, 24

Multiplicity and Absolute Magnitudes of Wolf-Rayet Stars in the Large Magellanic Cloud

Prévot-Burnichon, M.L., Prévot, L., Rebeirot, E., Rousseau, J., Martin, N. **103**, 83

The Absolute Magnitudes of G 5-M 3 Stars near the Giant Branch

Egret, D., Keenan, P.C., Heck, A. **106**, 115

uvby photometry of Visual Double Stars: Absolute Magnitudes of Intrinsically Bright Stars

Olsen, E.H. **110**, 179; **48**, 165

Absorption, see interstellar Absorption, Line Formation

Water vapour absorption at 2.7 μ m from M-type Mira variables

Iyengar, K.V.K., Ghosh, S.K., Tandon, S.N. **128**, 255

Abundances, interstellar

Nitrogen and Oxygen Abundances in Galaxies

Alloin, D., Collin-Souffrin, S., Joly, M., Vigroux, L. **78**, 200

A New Upper Limit to the Abundance Ratio of Atomic Deuterium to Hydrogen in the Direction of the Galactic Centre

Anantharamaiah, K.R., Radhakrishnan, V. **79**, L9

Radio Determination of Oxygen Abundance Variation in the Galaxy

Mezger, P.G., Pankonin, V., Schmid-Burgk, J., Thum, C., Wink, J. **80**, L3

Chemical Composition and Evolution of Irregular and Blue Compact Galaxies

Lequeux, J., Peimbert, M., Rayo, J.F., Serrano, A., Torres-Peimbert, S. **80**, 155

Charge Transfer Reactions. II. A Photoionization Model of the Planetary Nebula NGC 7662

Péquignot, D. **83**, 52

CH Observations of Three Bright Rimmed Molecular Clouds

Sandell, G., Höglund, B., Friberg, P. **83**, 226

The Far Ultraviolet Emission of the Central Stars of Planetary Nebulae

Natta, A., Pottasch, S.R., Preite-Martinez, A. **84**, 284

Some Comments on the Analysis of Extragalactic H II Regions Spectra

Stasińska, G. **84**, 320

The Interest of High Spatial Resolution Observations of Presumed Metal-rich H II Regions

Stasińska, G. **85**, 359

Spatial Distribution of Fine Structure Line Radiation in W 3 IRS 1: Implications for Far UV Properties of Dust Opacity

Lacasse, M.G., Herter, T., Krassner, J., Helfer, H.L., Pipher, J.L. **86**, 231

The Helium Abundance of Galactic H II Regions

Thum, C., Mezger, P.G., Pankonin, V. **87**, 269

The Calculation of the Optical Spectra of NGC 6888

Contini, M., Shaviv, G. **88**, 117

A Unified Model of Interstellar Grains: A Connection between Alignment Efficiency, Grain Model Size, and Cosmic Abundance

Hong, S.S., Greenberg, J.M. **88**, 194

Hydrostatic Models of Molecular Clouds. I. Steady State Models

de Jong, T., Dalgarno, A., Boland, W. **91**, 68

The "Helium Problem" in the Source DR 21

Pitault, A. **91**, 374

Erratum: The Far Ultraviolet Emission of the Central Stars of Planetary Nebulae

Natta, A., Pottasch, S.R., Preite-Martinez, A. **91**, 378

Astrophysical Interpretation of the $\lambda\lambda$ 1200-7300 Å Emission Line Spectrum of a Filament in the Cygnus Loop Supernova Remnant

D'Odorico, S., Benvenuti, P., Dennefeld, M., Dopita, M.A., Greve, A. **92**, 22

Deuterium in the Solar System

Geiss, J., Reeves, H. **93**, 189

Abundance Determinations in H II Regions: A Critical Analysis of Two Empirical Methods

Stasińska, G., Alloin, D., Collin-Souffrin, S., Joly, M. **93**, 362

Optical Spectrum of the Filamentary H II Region North of the Carina Complex

Hua, C.T., Llebaria, A. **94**, 12

An Ultraviolet Study of NGC 7662

Benvenuti, P., Perinotto, M. **95**, 127

On the Abundance Structure of the Inner Galactic Halo: A Preliminary Report

Trefzger, Ch.F. **95**, 184

The Electron Temperatures of W 31 C and S 206

Carral, P., Rodriguez, L.F., Chaisson, E.J. **95**, 388

An Analysis of Neutral Atomic Species Observed in Diffuse Interstellar Clouds

Federman, S.R. **96**, 198

A Fine Analysis of the Extreme Helium-rich Star HD 168476

Walker, H.J., Schönberner, D. **97**, 291

Abundance of Interstellar Nitrogen

Ferlet, R. **98**, L1

The Abundance and Excitation of the Carbon Chains in Interstellar Molecular Clouds

Bujarrabal, V., Guélin, M., Morris, M., Thaddeus, P. **99**, 239

Erratum: Radio Determination of Oxygen Abundance Variation in the Galaxy

Mezger, P.G., Pankonin, V., Schmid-Burgk, J., Thum, C., Wink, J. **99**, 400

UV Spectroscopy of Planetary Nebulae

Perinotto, M., Benvenuti, P. **100**, 241

The Planetary Nebula NGC 7009

Perinotto, M., Benvenuti, P. **101**, 88

The Mild Abundance Gradient of NGC 1365

Alloin, D., Edmunds, M.G., Lindblad, P.O., Pagel, B.E.J. **101**, 377

The Relative Abundances of the Elements Scandium to Manganese in Relativistic Cosmic Rays and the Possible Radioactive Decay of Manganese 54

Koch, L., Engelmann, J.J., Goret, P., Juliusson, E., Petrou, N., Rio, Y., Soutoul, A., Byrnak, B., Lund, N., Peters, B., and others **102**, L9

The Ultraviolet Spectrum of the Planetary Nebula NGC 2371 and its Exciting Star

Pottasch, S.R., Gathier, R., Gilra, D.P., Wesselius, P.R. **102**, 237

Physics of the Peripheral Zones of H II Regions. I. Border Enhancements of [O III]/H β and He I/H β in H II Regions

Heydari-Malayeri, M. **102**, 316

Near-infrared Spectroscopy of Northern Supernova-remnants

Dennefeld, M., Andriolat, Y. **103**, 44

The Helium to Heavy Element Enrichment Ratio, $\Delta Y/\Delta Z$

Chiosi, C., Matteucci, F. **105**, 140

NLTE Model Atmospheres for Early-type Stars of Various Chemical Compositions and Resulting Emission-line Spectra for Surrounding H II Regions

Borsenberger, J., Stasińska, G. **106**, 158

The State of Ionization in Dense Molecular Clouds

Guélin, M., Langer, W.D., Wilson, R.W. **107**, 107

Astronomical Study of the C₂N and C₄H Radicals: Hyperfine Interactions and Rho-type Doubling

Guélin, M., Friberg, P., Mezaoui, A. **109**, 23

Abundances in the Planetary Nebula NGC 6853

Pottasch, S.R., Gilra, D.P., Wesselius, P.R. **109**, 182

Further (¹²C/¹³C) Ratios from Formaldehyde: A Variation with Distance from the Galactic Center

Henkel, C., Wilson, T.L., Bieging, J. **109**, 344

Are All Galactic Nuclear Regions Sodium Rich?

Véron-Cetty, M.P., Véron, P., Tarengchi, M. **113**, 46

NH⁺ - A Candidate for Comets and Interstellar Space

de Almeida, A.A., Singh, P.D. **113**, 199

Soft X-ray Filter Spectroscopy of the Supernova Remnants Vela X and Puppis A

Burkert, W., Zimmermann, H.U., Aschenbach, B., Bräuninger, H., Williamson, F. **115**, 167

The Galactic Abundance Gradient from Supernova Remnant Observations

Binette, L., Dopita, M.A., D'Odorico, S., Benvenuti, P. **115**, 315

Emission-line spectra of H II regions: dependence on metal abundances in the atmosphere of the ionizing star and in the nebular gas

Köppen, J., Schmid-Burgk, J., Scholz, M. **118**, 203

A rediscussion of sulfur abundances in Magellanic Clouds and Galactic H II regions

Dennefeld, M., Stasińska, G. **118**, 234

Surface chemistry of deuterated molecules

Tielens, A.G.G.M. **119**, 177

The ratio of deuterium to hydrogen in interstellar space. V. The line of sight to ϵ Persei

Vidal-Madjar, A., Laurent, C., Gry, C., Bruston, P., Ferlet, R., York, D.G. **120**, 58

The Crab Nebula. I. Photoionization models of a bright filament

Péquignot, D., Dennefeld, M. **120**, 249

Interstellar C₂ in the Ophiuchus clouds

Danks, A.C., Lambert, D.L. **124**, 188

The Crab Nebula. II. Near-infrared spectrophotometry of a bright filament

Dennefeld, M., Péquignot, D. **127**, 42

An H7 α survey of galactic H II regions: electron temperature and element gradients

Wink, J.E., Wilson, T.L., Biegging, J.H. **127**, 211

Neon abundances in nearby H II regions

Thum, C., Nishimura, T. **127**, 383

Formaldehyde towards compact H II: densities and isotope ratios

Henkel, C., Wilson, T.L., Walmsley, C.M., Pauls, T. **127**, 388

Abundances, solar, see also Solar System

The Solar Oxygen Abundance

Meyer, A., Nussbaumer, H. **78**, 33

Oscillator Strengths of Fe II Lines Derived from the Solar Spectrum: Choice of Solar Model Atmosphere

Blackwell, D.E., Shallis, M.J., Simmons, G.J. **81**, 340

A Reassessment of the Zinc Solar Abundance

Biémont, E., Godefroid, M. **84**, 361

A Solar Abundance of Nickel Independent of Line Broadening Parameters

Biémont, E., Grevesse, N., Huber, M.C.E., Sandeman, R.J. **87**, 242

Stellar Evolution with Turbulent Diffusion Mixing. III. The Solar Model and the Neutrino Problem

Schatzman, E., Maeder, A., Angrand, F., Glowinski, R. **96**, 1

Non-resonance Lines of Neutral Calcium in the Spectra of the Sun and Procyon

Smith, G. **103**, 351

Fast Neutron Capture on ¹⁸⁰Hf and ¹⁸⁴W and the Solar Hafnium and Tungsten Abundance

Beer, H., Käppeler, F., Wisshak, K. **105**, 270

Absolute Transition Probabilities in the Spectra of Eu II. III. Astrophysical Applications

Biémont, E., Karner, C., Meyer, G., Träger, F., zu Putlitz, G. **107**, 166

Radiative Lifetimes for Pd I and the Solar Abundance of Palladium

Biémont, E., Grevesse, N., Kwiatkowski, M., Zimmermann, P. **108**, 127

Infrared Bands of C₂ in the Solar Photospheric Spectrum

Brault, J.W., Delbouille, L., Grevesse, N., Roland, G., Sauval, A.J., Testerman, L. **108**, 201

The Solar Structure and the Low l Five-minute Oscillation. I

Gabriel, M., Scuflaire, R., Noels, A. **110**, 50

The Influence of Temperature Inhomogeneities in the Solar Atmosphere on Abundance Determinations

Hermesen, W. **111**, 233

Analysis of Fe I Lines (0.00 eV < χ < 12.6 eV) in the Solar Spectrum Using Improved Damping Constants and Accurate Oscillator Strengths: Test of a Solar Model Atmosphere

Simmons, G.J., Blackwell, D.E. **112**, 209

New Lifetime Measurements for Nb I and Rh I and the Solar Photospheric Abundances of Nb and Rh

Kwiatkowski, M., Zimmermann, P., Biémont, E., Grevesse, N. **112**, 337

The Solar Structure and the Low l Five-minute Oscillation. II

Scuflaire, R., Gabriel, M., Noels, A. **113**, 219

Empirical NLTE Analyses of Solar Spectral Lines. III. Iron Lines Versus LTE Models of the Photosphere

Rutten, R.J., Kostik, R.I. **115**, 104

The Analysis of Fe XIV 5303 Coronal Emission-line Polarization Measurements

Arnaud, J. **116**, 248

Empirical NLTE analyses of solar spectral lines. IV. The Fe I curve of growth

Rutten, R.J., Zwaan, C. **117**, 21

Determination of natural radiative lifetimes of the $5p^2P$ state in Ga I and $6p^2P$ state in In I using a pulsed dye laser

Zaki Ewiss, M.A., Snoek, C., Dönszelmann, A. **121**, 327

The solar mercury abundance

Walter, G., Beer, H. **123**, 279

Influence of the equations of state and of the Z value on the solar five-minute oscillation

Shibahashi, H., Noels, A., Gabriel, M. **123**, 283

Abundances, stellar, see also Isotopes, Metal Abundance, Stellar Atmospheres, and under the different ObjectsNucleosynthesis of ⁷Li in Flares on UV Ceti Stars

Karpen, J.T., Worden, S.P. **71**, 92

LTE and Non-LTE Abundance Analyses of Nitrogen Deficient Supergiants in a Loose Association

Dufton, P.L. **73**, 203

The Iron Abundance in Herbig-Haro Objects and Some New Data on H-H 2 H

Böhm, K.H., Brugel, E.W. **74**, 297

Differential Analysis of the Extreme Metal-deficient Stars HD 84903 and HD 184711 Relative to the Halo Star HD 122563

Spite, M., Spite, F. **76**, 150

Radiation Forces and the Abundance of Boron in Normal and Peculiar Stars of Type A and B

Borsenberger, J., Michaud, G., Praderie, F. **76**, 287

Spectral Analysis of Vega from Copernicus

Castelli, F., Faraggiana, R. **79**, 174

The Effect of Mass Loss on the Chemical Yields from Massive Stars

Chiosi, C., Caimmi, R. **80**, 234

- The Chemical Abundance Gradient in the Galaxy Derived from an Analysis of the H-R Diagrams of Open Clusters
Panagia, N., Tosi, M. **81**, 375
- RR Lyrae Pulsators as Helium Indicators in Globular Clusters
Caputo, F., Castellani, V., Tornambè, A. **82**, 79
- Helium Abundance Variation Among Galactic Globular Clusters?
Caputo, F., Castellani, V., Martini, A. **82**, 305
- The Cool DA White Dwarf G 128-7: Atmospheric Parameters and Evolutionary Consequences
Wehrse, R., Liebert, J. **83**, 184
- Four-colour Photometry of Eclipsing Binaries. XIA. Photometric Elements, Absolute Dimensions, and Helium Abundance of RS Chamaeleontis
Clausen, J.V., Nordström, B. **83**, 339
- Carbon, Nitrogen, and Oxygen Abundances in Loose Association and Field B-type Stars
Kane, L., McKeith, C.D., Dufton, P.L. **84**, 115
- Detailed Analysis of High Velocity Stars
Foy, R. **85**, 287
- On the Structure and Composition of the Wolf-Rayet Atmospheres
Sahade, J. **87**, L7
- The Variation of the CNO Abundances in Massive Binary Systems: an Application to Wolf-Rayet Stars
Vanbeveren, D., Doom, C. **87**, 77
- The Identification of Rare Earths in the Silicon Star HD 187473
Hensberge, H., Cowley, C.R., van Rensbergen, W., Aikman, G.C.L. **87**, 369
- The Relationship between the Envelope Composition of a 6 M Red-giant Model and its Future Evolution
Prialnik, D., Shaviv, G. **88**, 127
- Synthesis of Light Metals in the Galaxy. Aluminium Abundances in Cool Halo Stars
Spite, M., Spite, F. **89**, 118
- A Catalogue of [Fe/H] Determinations
Cayrel de Strobel, G., Bentolila, C., Hauck, B., Curchod, A. **89**, 253; **41**, 405
- The Atmospheric Abundances of the Giant Am Star 22 Bootis
Burkhardt, C., Van't Veer, C., Couprie, M.F. **92**, 132
- Surface Composition Changes in Massive Star Evolution with Mass Loss
Noels, A., Conti, P.S., Gabriel, M., Vreux, J.M. **92**, 242
- Detailed Analysis of Cool Giants with Low Microturbulent Velocity
Foy, R. **93**, 315
- Narrow Ultraviolet Absorption Lines of Nova Cygni 1978
Friedjung, M. **93**, 320
- Some Consequences of Sr, Y, and Zr *gf* Values Calculation
Pirronello, V., Strazzulla, G. **93**, 411
- Advanced Evolutionary Stages of Intermediate-mass Stars. I. Evolution of Surface Compositions
Renzini, A., Voli, M. **94**, 175
- IUE Observation of UV Carbon I Absorption Lines in the Spectrum of the C₂ White Dwarf L 97-3
Weidemann, V., Koester, D., Vauclair, G. **95**, L9
- NON-LTE Analysis of Subluminous O-stars. IV. Spectral Photometry and NLTE Analysis of 11 Subluminous Stars
Hunger, K., Gruschinske, J., Kudritzki, R.P., Simon, K.P. **95**, 244
- The Effects of an Undetected Duplicity on Spectroscopic Analyses of Main-sequence Stars
Barambon, C., Jousson, M. **96**, 189
- A New Interpretation of the Heavy Element Abundances in Metal-deficient Stars
Truran, J.W. **97**, 391
- The Helium Content of the Blue Star Near the Center of SN 1006
Simon, K.P., Hunger, K., Kudritzki, R.P. **98**, 211
- Chemical Composition in M 67 from Detailed Analyses
Foy, R., Proust, D. **99**, 221
- Discovery of Strong Ultraviolet Absorption in the Spectrum of the DC White Dwarf G 33-49
Vauclair, G., Weidemann, V., Koester, D. **100**, 113
- Kinematical and Chemical Evolution of the Galactic Disk near the Sun
Vader, J.P., de Jong, T. **100**, 124
- UV Spectroscopy of Planetary Nebulae
Perinotto, M., Benvenuti, P. **100**, 241
- The Planetary Nebula NGC 7009
Perinotto, M., Benvenuti, P. **101**, 88
- Evolution of Massive Stars with Mass Loss and Formation of WR Stars
Noels, A., Gabriel, M. **101**, 215
- Carbon-to-iron Ratio in Extreme Population II Stars
Barbuy, B. **101**, 365
- A Catalogue of [Fe/H] Determinations
Cayrel De Strobel, G., Bentolila, C., Hauck, B., Lovy, D. **101**, 419; **45**, 97
- Detailed Analysis of a G Supergiant in the Small Magellanic Cloud
Foy, R. **103**, 135
- Diffusion Models for Magnetic Ap-Bp Stars
Michaud, G., Mégessier, C., Charland, Y. **103**, 244
- Non-resonance Lines of Neutral Calcium in the Spectra of the Sun and Procyon
Smith, G. **103**, 351
- The Sr-Y-Zr Abundance Peak in HR 6127
Pirronello, V., Strazzulla, G. **104**, 80
- On Some Extreme Metal-deficient Giants
Bartkevičius, A., Straižys, V. **104**, 215
- The Helium to Heavy Element Enrichment Ratio, *AY/AZ*
Chiosi, C., Matteucci, F. **105**, 140
- NLTE Model Atmospheres for Early-type Stars of Various Chemical Compositions and Resulting Emission-line Spectra for Surrounding H II Regions
Borsenberger, J., Stasińska, G. **106**, 158
- LB 3459 - An O-type Subdwarf Eclipsing Binary System. Non-LTE Analysis of the Primary
Kudritzki, R.P., Simon, K.P., Lynas-Gray, A.E., Kilkenny, D., Hill, P.W. **106**, 254
- Mass Loss Rates in the Open Cluster IC 1805
Llorente de Andrés, F., Burki, G., Ruiz del Arbol, J.A. **107**, 43
- On the Detection of Abundance Stratifications in Peculiar Stars Through the Curve of Growth Method
Alecian, G. **107**, 61
- Lithium and Barium in RCrB and XX Cam
Hunger, K., Schönberner, D., Steenbock, W. **107**, 93
- Absolute Transition Probabilities in the Spectra of Eu II. III. Astrophysical Applications
Biéumont, E., Karner, C., Meyer, G., Träger, F., zu Putlitz, G. **107**, 166
- Nitrogen Anomalies in O-type Stars: A New Spectroscopic Criterion
Bisicacchi, G.F., López, J.A., Firmani, C. **107**, 252

- Classification Properties of the Vilnius-Geneva Photometric System. II. Stars with Peculiar Chemical Composition
North, P., Hauck, B., Straižys, V. **108**, 373
- Spectral Analysis of the OB Subdwarf HD 149 382
Baschek, B., Kudritzki, R.P., Scholz, M., Simon, K.P. **108**, 387
- Models of Stellar Evolution and Their Use in Calibrating Distances and Element Abundances of Stars
Gehren, T. **109**, 187
- Open Clusters in Our Galaxy
Lynga, G. **109**, 213
- uvby β* Photometry of Visual Double Stars: A Comparison With Stellar Models and Isochrones
Olsen, E.H. **110**, 215
- Spectroscopic Orbits for Two Very High Velocity Halo Stars: HD 111980 and HD 149414
Mayor, M., Turon, C. **110**, 241
- A Search for Ap Stars in the Scorpio-Centaurus Association: Additional Evidence for a Slow Metal Enrichment
Borra, E.F., Joncas, G., Wizinowich, P. **111**, 117
- Molecules in Red-giant Stars. I. Column Densities in Models for K and M Stars
Johnson, H.R., Sawal, A.J. **111**, 210; **49**, 77
- The Influence of CN Abundances on the Evolution of Main Sequence of Low-mass Stars
Bazzano, A., Caputo, F., Sestili, M., Castellani, V. **111**, 312
- A Search for Medium Z Elements in the Ultraviolet Spectrum of κ Cancri
Davidson, J.P., Bord, D.J. **111**, 362
- The OB Subdwarf Feige 66, a Chemical-composition Twin to HD 149382
Baschek, B., Höflich, P., Scholz, M. **112**, 76
- NGC 2440: Ionization Structure, Extinction, and Near Infrared Spectrum
Condal, A.R. **112**, 124
- Discovery of Ca II Absorption at 1840 Å in the IUE Spectra of Two Helium-rich White Dwarfs
Koester, D., Vaclair, G., Weidemann, V., Zeidler-K.T., E.M. **113**, L13
- A Model Atmosphere Analysis of Procyon (α CMi, F5 IV-V)
Kato, K., Sadakane, K. **113**, 135
- Fine Analysis of the Intermediate Helium-star CPD-46°3093
Groote, D., Kaufmann, J.P., Lange, A. **114**, 420; **50**, 77
- Evolution of Low Mass Zero Metal Giants up to the Helium Flash
D'Antona, F., Mazzitelli, I. **115**, L1
- Carbon, Nitrogen and Oxygen Abundances in G8-K3 Giant Stars
Kjaergaard, P., Gustafsson, B., Walker, G.A.H., Hultqvist, L. **115**, 145
- Abundances in Metal-poor Stars. I. The Globular Clusters NGC 2808, NGC 3201, NGC 6397, and M 22
Gratton, R.G. **115**, 171
- The Mid-ultraviolet Spectrum of ϵ Aurigae
Castelli, F., Hoekstra, R., Kondo, Y. **115**, 217; **50**, 233
- Abundances in Metal-poor Stars. II. The Anomalous Globular Cluster ω Centauri
Gratton, R.G. **115**, 336
- Abundance of Lithium in Unevolved Halo Stars and Old Disk Stars: Interpretation and Consequences
Spite, F., Spite, M. **115**, 357
- Atmospheric Parameters and Carbon Abundance of White Dwarfs of Spectral Types C₂ and DC
Koester, D., Weidemann, V., Zeidler-K.T., E.-M. **116**, 147
- Non-resonance lines of neutral calcium in the spectra of Arcturus and β Virginis
Smith, G., Lambert, D.L. **117**, 177
- Spectral fine analysis of the extreme helium star BD +10°2179
Heber, U. **118**, 39
- Emission-line spectra of H II regions: dependence on metal abundances in the atmosphere of the ionizing star and in the nebular gas
Köppen, J., Schmid-Burgk, J., Scholz, M. **118**, 203
- Non-LTE analysis of massive O-stars. II. The O4 star ζ Puppis
Kudritzki, R.P., Simon, K.P., Hamann, W.-R. **118**, 245
- Evolution of a Population III star of low mass
Guenther, D.B., Demarque, P. **118**, 262
- Status of evolution of F, G, and K field stars contained in the [Fe/H] catalogue
Cayrel de Strobel, G., Bentolila, C. **119**, 1
- Four-colour photometry of some globular cluster giants in the Galaxy and the Magellanic Clouds
Richtler, T., Nelles, B. **119**, 75
- Model-atmosphere analysis of high-dispersion spectra of four red giants and supergiants
Kovács, N. **120**, 21
- Evolution of chemical abundances in massive stars. II. Abundance anomalies in Wolf-Rayet stars in relation with cosmic rays and ²²Ne in meteorites
Maeder, A. **120**, 130
- Oscillator strengths and Ne abundance in B stars
Magazzù, A., Pirronello, V., Strazzulla, G. **120**, 139
- Erratum: Evolution of Low Mass Zero Metal Stars up to the Helium Flash
D'Antona, F., Mazzitelli, I. **120**, 164
- Non-LTE analysis of subluminescent O-stars. V. The binary system HD 128220
Gruschinske, J., Hamann, W.-R., Kudritzki, R.-P., Simon, K.P., Kaufmann, J.P. **121**, 85
- The hydrogen-rich, cool DA white dwarf Ross 627
Liebert, J., Wehrse, R. **122**, 297
- Molecular hydrogen lines in the infrared spectra of M-giant stars
Tsuji, T. **122**, 314
- Note on technetium in stars
Schatz, G. **122**, 327
- Nitrogen and oxygen as indicators of primordial enrichment
Barbuy, B. **123**, 1
- The galactic globular cluster system: helium content versus metallicity
Caputo, F., Cayrel, R., Cayrel de Strobel, G. **123**, 135
- The canonical anticorrelation between Y and Z in galactic globular clusters and the case of the pulsars in M15
Caputo, F., Castellani, V., di Gregorio, R. **123**, 141
- Abundances in metal-poor stars. III. Eleven field giants
Gratton, R.G. **123**, 289
- Spectrum analysis of the barium stars HD 83548 and HD 65699
Kovács, N. **124**, 63
- Stellar deuterium abundance: a new upper limit in Canopus
Ferlet, R., Dennefeld, M., Spite, M. **124**, 172
- RGU photometry and Population II stars
Thévenin, F., Spaenhauer, A., Foy, R. **124**, 331
- Barium, magnesium, and iron in seven chemically unevolved stars and the nuclear evolution of the galactic disk
Steenbock, W. **126**, 325
- Stellar evolution of globular cluster giants in which the external layers are CNO-enriched
Chieffi, A., D'Antona, F. **126**, 372

The Al/Mg abundance ratio in halo stars

Arpigny, C., Magain, P. **127**, L7

IUE observations of the eclipsing binaries TV Cas and YZ Cas

de Landtsheer, A.C., Mulder, P.S. **127**, 297

Helium abundance in globular clusters: the R-method

Buzzoni, A., Fusi Pecci, F., Buonanno, R., Corsi, C.E. **128**, 94

The galactic Globular Cluster System: the metallicity ranking and the second parameter problem

Caputo, F. **128**, 190

UV and visible spectrophotometry of nine LMC Wolf-Rayet stars

Smith, L.J., Willis, A.J. **128**, 261; **54**, 229

The spectrum of FG Sge in 1979-1982. II. $\lambda\lambda$ 6250-6800 Å

Acker, A. **128**, 261; **54**, 293

Analysis of three K-type dwarf stars: HD 10476, HD 17925, and HD 37394

Perrin, M.-N. **128**, 347

Accretion, see also Stellar Wind

Accretion from Interstellar Clouds and White Dwarf Spectral Evolution

Wesemael, F. **72**, 104

The Accretion Picture of Cen X-3 as Inferred from One Month of Continuous X-ray Observations

Bonnet-Bidaud, J.M., van der Klis, M. **73**, 90

Dirty Solar Models

Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **73**, 121

The Stability of Bondi Accretion

Garlick, A.R. **73**, 171

X-ray Sources and Their Induced Surrounding Clouds

Chan, K.L., Henriksen, R.N., Chau, W.Y. **75**, 133

Chemically Peculiar A Stars and Accretion of Grains

Havnes, O. **75**, 197

Image of a Spherical Black Hole with Thin Accretion Disk

Luminet, J.-P. **75**, 228

Accretion onto ZAMS Stars: Application to β Lyrae and Remarks on X-ray Binaries

Packet, W., Grève, J.P. de **75**, 255

Supercritical Accretion on to Unmagnetized Neutron Stars and the Galactic Bulge X-ray Sources

Jones, B.C., Raine, D.J. **76**, 179

The Unimportance of Line Blocking in the Spectra of Accretion Disks

Wesemael, F. **77**, 354

Disk Accretion in a Soft Potential Well

Icke, V. **78**, 21

Star Formation through an Accretion Shock: A Model for H⁺ Blisters

Icke, V. **78**, 352

Erratum: Dirty Solar Models

Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **79**, 269

The Chemical Evolution of White Dwarf Atmospheres: Diffusion and Accretion

Vauclair, G., Vauclair, S., Greenstein, J.L. **80**, 79

Supercritical Disc Accretion on to Black Holes: Quasars and Type I Seyferts

Jones, B.C., Raine, D.J. **81**, 128

A Neutral Hydrogen Survey of NGC 2685

Shane, W.W. **82**, 314

Accretion of Gas by a Schwarzschild Black Hole

Ray, D. **82**, 368

Accretion by Neutron Stars: Accretion Disk and Rotating Magnetic Field

Anzer, U., Börner, G. **83**, 133

Adiabatic Accretion onto a Schwarzschild Black Hole

Brinkmann, W. **85**, 146

Stability of White Dwarfs Undergoing Spherically Symmetric Steady-state Accretion

Sienkiewicz, R. **85**, 295

Spectroscopic Evidence of Strong Mass Flow Variations in the Envelope of the T Tauri Star DR Tau

Appenzeller, I., Krautter, J., Smolinski, J., Wolf, B. **86**, 113

Electrodynamics of Disk Accretion onto Magnetic Neutron Star

Aly, J.J. **86**, 192

Accretion and Radiation Spectrum of the Gas Debris of a Star Disrupted by the Tidal Forces of a Massive Black Hole

Gurzadyan, V.G., Ozernoy, L.M. **86**, 315

Thick Accretion Disks and Supercritical Luminosities

Paczynsky, B., Wiita, P.J. **88**, 23

Buoyancy Effects in Spherical Accretion

Garlick, A.R. **89**, 48

Stability of Accretion Column Flows

Hameury, J.M., Bonazzola, S., Heyvaerts, J. **90**, 359

The Mass Function for Stars in a Cluster: a Theoretical Derivation

Bhattacharjee, S.K., Williams, I.P. **91**, 85

On the Size of Accretion Disks in Cataclysmic Binaries

Ritter, H. **91**, 161

Dipole Confined by a Disk

Kundt, W., Robnik, M. **91**, 305

A Search for Variability in White Dwarfs in the Region of the Hyades

Peterson, D.W., Beavers, W.I. **92**, 214

Plasma Infall and X-ray Production in the Magnetic Funnel of an Accreting Neutron Star

Wang, Y.-M., Frank, J. **93**, 255

Profile of a Line Emitted by an Accretion Disk. Influence of the Geometry upon its Shape Parameters

Gerbai, D., Pelat, D. **95**, 18

Accretion of the Cloud of Gas Debris of Stars Disrupted by the Tidal Forces of a Supermassive Black Hole

Gurzadyan, V.G., Ozernoy, L.M. **95**, 39

Supermassive Black Holes and Emission Lines of Active Galaxies and QSOs: Accretion Rate, Black Hole Mass, and Photoionization Models

Aldrovandi, S.M.V. **97**, 122

Metal Enrichment in the Atmospheres of Extremely Metal-deficient Dwarf Stars by Accretion of Interstellar Matter

Yoshii, Y. **97**, 280

A Study of the Spectrum of WZ Sge During Its 1978 Outburst

Friedjung, M. **99**, 226

Supercritical, Steady-state, Spherically Symmetric Accretion into a Black Hole

Freihoffer, D. **100**, 178

On Stellar Wind Accretion in Widely Separated X-ray Binaries, and the Nature of 4U0115+63

Avni, Y., Goldman, I. **102**, 12

The Fe II Spectrum of Seyfert 1 Galaxies and Quasars

Joly, M. **102**, 321

On Some Possible Relativistic Effects in SS433

Ruffini, R., Doo Jong Song, Stella, L. **103**, L7

Average Properties of Low-mass X-ray Binaries

van Paradijs, J. **103**, 140

On the Elusive Cause of Cataclysmic Variable Outbursts

Meyer, F., Meyer-Hofmeister, E. **104**, L10

Vertical Structure of Accretion Disks

Meyer, F., Meyer-Hofmeister, E. **106**, 34

Spherical Accretion with e^+e^- -Pair Production

Brinkmann, W.P. **107**, 48

- Non-thermal Emission from Relativistic Accretion Disks: A Simple Model for Axisymmetric Inhomogeneous Sources
Pineault, S. **109**, 294
- On the Time Scales of the Pair Production Processes in Astrophysics
Zdziarski, A.A. **110**, L7
- GX339-4: Cyclotron Radiation from an Accretion Flow
Fabian, A.C., Guilbert, P.W., Motch, C., Ricketts, M., Ilovaisky, S.A., Chevalier, C. **111**, L9
- Hydrogen-Helium Flashes on Accreting Neutron Stars as a Possible Origin of Gamma-ray Bursts
Hameury, J.M., Bonazzola, S., Heyvaerts, J., Ventura, J. **111**, 242
- VBLUW Photometry of RZ Oph (BD +7° 3832): Eclipse of the Accretion Disk
van Paradijs, J., van der Woerd, H., van der Bij, M., Lee Van Suu, A. **111**, 372
- Meridional Circulation in Optically Thick Accretion Disks
Cabot W., Savedoff, M.P. **112**, L1
- Color Variability and Optical Light Curve of 2S0921-630
Chevalier, C., Ilovaisky, S.A. **112**, 68
- On the Origin of Low Mass Cataclysmic Binaries
Livio, M. **112**, 190
- Comments on Radial White Dwarf Accretion
Kuijpers, J., Pringle, J.E. **114**, L4
- On the Compatibility of Thermal and Hydrostatic Equilibrium in Thin Radiative Accretion Disks
Kippenhahn, R., Thomas, H.-C. **114**, 77
- Hydrodynamical Calculations of Accretion Disks in Close Binary Systems. I. Method
Hensler, G. **114**, 309
- Hydrodynamical Calculations of Accretion Disks in Close Binary Systems. II. Models
Hensler, G. **114**, 319
- The UV Spectrum of the Old Nova HR Del at Different Orbital Phases
Friedjung, M., Andriolat, Y., Puget, P. **114**, 351
- Stationary Spherical Accretion into Black Holes. The Transition from the Optically Thin to the Optically Thick Regime
Soffel, M.H. **116**, 111
- Fast Coherent Oscillations in Variable X-ray Sources and Bursters
Livio, M., Bath, G.T. **116**, 286
- Dynamical friction on extended objects
Mulder, W.A. **117**, 9
- Simultaneous X-ray/optical observations of GX 339-4 during the May 1981 optically bright state
Motch, C., Ricketts, M.J., Page, C.G., Ilovaisky, S.A., Chevalier, C. **119**, 171
- The symbiotic star CH Cyg: the occasional transition from an unstable to a stable accretion disk
Duschl, W.J. **119**, 248
- Helium cyclotron emission from accreting magnetized neutron stars
Apparao, K.M.V., Chitre, S.M. **121**, L1
- A model for the standstill of the Z Camelopardalis variables
Meyer, F., Meyer-Hofmeister, E. **121**, 29
- On the influence of the "α-turbulence" on the energy transport in accretion disks
Duschl, W.J. **121**, 153
- Gravitational settling in layers accreted on neutron stars and its relations to gamma ray bursts
Hameury, J.M., Heyvaerts, J., Bonazzola, S. **121**, 259
- Accretion onto rotating, magnetic neutron stars: the inner edge of the disk
Anzer, U., Börner, G. **122**, 73
- Oxygen neutronization in accreting white dwarfs
Bravo, E., Isern, J., Labay, J., Canal, R. **124**, 39
- A study of UV spectra of ζ Aur/VV Cep stars. IV. System parameters and mass-loss of δ Sge
Reimers, D., Schröder, K.-P. **124**, 241
- Star-planet systems as progenitors of cataclysmic binaries: tidal effects
Livio, M., Soker, N. **125**, L12
- The old-nova GK Per (1901). III. Accretion disc models
Bianchini, A., Sabbadin, F. **125**, 112
- The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. II. The fuelling of radio sources
Valentijn, E.A., Bijleveld, W. **125**, 223
- The disk-star boundary layer and its effect on the accretion disk structure
Regev, O. **126**, 146
- Accretion disks in Seyfert nuclei: broad line profiles and asymmetries
van Groningen, E. **126**, 363
- Accretion disks in cataclysmic variables. The influence of the frictional parameter α on the structure
Meyer, F., Meyer-Hofmeister, E. **128**, 420
- Acoustic Waves**, see also Solar Chromosphere, Stellar Chromospheres
- Line Driven Sound Waves in Early Type Stars
Martens, P.C.H. **75**, L7
- Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. I. The Method
Leroy, B., Bel, N. **78**, 129
- Coronal Evolution and Solar Type I Radio Bursts: An Ion-acoustic Wave Model
Benz, A.O., Wentzel, D.G. **94**, 100
- Acoustic Waves in the Solar Atmosphere. VI. Feautrier Type Radiation Treatment
Wolf, B.E., Schmitz, F., Ulmschneider, P. **97**, 101
- Comments on the Acoustic Heating of Stellar Coronae
Ulmschneider, P., Bohn, H.U. **99**, 173
- Active Galaxies**, see Galaxies, Markarian Galaxies, Quasi-stellar Objects, Seyfert Galaxies, X-ray Radiation
- An Optical and Radio Survey of the Nuclei of Bright Galaxies. Activity in Normal Galactic Nuclei
Heckman, T.M. **87**, 152
- Thick Accretion Disks and Supercritical Luminosities
Paczynski, B., Wiita, P.J. **88**, 23
- The Broad Line Region in Active Nuclei and Quasars: Correlations with Luminosity and Radio Emission
Heckman, T.M. **88**, 311
- The Penrose Photoproduction Scenario for NGC4151; (PCSSC). A Black Hole γ-ray Emission Mechanism for Active Galactic Nuclei and Seyfert Galaxies
Leiter, D. **89**, 370
- New High Resolution Radio Observations of NGC4258. II. NGC 4258 as a Spiral Galaxy
van Albada, G.D. **90**, 123
- Far UV Study on the Non-thermal Activity in the Narrow Line Galaxies NGC 4507 and NGC 5506
Bergeron, J., Maccacaro, T., Perola, C. **97**, 94

Supermassive Black Holes and Emission Lines of Active Galaxies and QSOs: Accretion Rate, Black Hole Mass, and Photoionization Models

Aldrovandi, S.M.V. **97**, 122

Millimeter-wave and X-ray Observations of a Cen-A Flare

Kaufmann, P., Strauss, F.M., Coe, M.J., Carpenter, G.F. **100**, 189

A 1415 MHz Survey of Seyfert and Related Galaxies - II

Meurs, E.J.A., Wilson, A.S. **101**, 419; **45**, 99

Morphology and Photometry of the Nebulosity Associated with 3C 120

Wlérick, G., Bouchet, P., Cayatte, V., Michet, D. **102**, L17

Optical Spectroscopic and Electronographic Observations of the Radio Galaxy IC 5063

Appenzeller, I., Gaida, G. **102**, 230

An Assessment of the Detectability of X-ray Emission from Winds in Active Galactic Nuclei and Quasars

Beltrametti, M., Drew, J. **106**, 153

Profiles of [O III] Lines in QSOs

Miley, G.K., Heckman, T.M. **106**, 163

Mid-infrared Observations of Seyfert 1 and Narrow-line X-ray Galaxies

Glass, I.S., Moorwood, A.F.M., Eichendorf, W. **107**, 276

New High Resolution Radio Observations of NGC 4258. III.

VLA and WSRT Observations of the Anomalous Arms

van Albada, G.D., van der Hulst, J.M. **115**, 263

NGC 6240: A unique interacting galaxy

Fried, J.W., Schulz, H. **118**, 166

Super-Eddington luminosity characteristics of active galactic nuclei

Bassani, L., Dean, A.J., Sembay, S. **125**, 52

Composite models for the narrow emission line region of active galactic nuclei. I. The infalling filament

Contini, M., Aldrovandi, S.M.V. **127**, 15

Spatial structure of the extended ionized nebulosity around the radio galaxy IC 5063

Bergeron, J., Durret, F., Boksenberg, A. **127**, 322

Albedo

Comparison of Solar and Stellar Flux Distributions and the Determination of the *B-V* and *U-B* Colors of the Sun

Clements, G.L., Neff, J.S. **75**, 193

The Sun among the Stars. IV. Albedos of Uranus and Neptune and the Solar Color

Hardorp, J. **96**, 123

On the Definition of Albedo and Application to Irregular Particles

Hanner, M.S., Giese, R.H., Weiss, K., Zerull, R. **104**, 42

Alfvén Waves

On the Self-similar Solution for the Distribution Function of Particles Accelerated by Alfvén Waves

Lonngren, K.E., Axford, R.A. **81**, 363

Non-linear Interaction of Alfvén Waves with Compressive Fast Magnetosonic Waves

Lacombe, C., Mangeney, A. **88**, 277

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. II. The Reflection of Alfvén Waves

Leroy, B. **91**, 136

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. III. Alfvén Waves in the Solar Atmosphere

Leroy, B. **97**, 245

On the Propagation of Relativistic Particles in a High β Plasma

Achterberg, A. **98**, 161

The Ponderomotive Force due to Cosmic Ray Generated Alfvén Waves

Achterberg, A. **98**, 195

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. IV. Alfvén Waves in Sunspot Umbrae

Bel, N., Leroy, B. **104**, 203

Alfvénic Fluctuations as Asymptotic States of MHD Turbulence

Grappin, R., Frisch, U., Leorat, J., Pouquet, A. **105**, 6

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. V. The Theory of Magneto-Acoustic-Gravity Oscillations

Leroy, B., Schwartz, S.J. **112**, 84

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. VI. Application of Magneto-Acoustic-Gravity Mode Theory to the Solar Atmosphere

Schwartz, S.J., Leroy, B. **112**, 93

Non-linear Theory of Cosmic Ray Shocks Including Self-generated Alfvén Waves

McKenzie, J.F., Völk, H.J. **116**, 191

Coronal heating by phase-mixed shear Alfvén waves

Heyvaerts, J., Priest, E.R. **117**, 220

Short period coronal oscillations: observation and interpretation

Koutchmy, S., Žugžda, Y.D., Locans, V. **120**, 185

The role of non-linear Landau damping in cosmic ray shock acceleration

McKenzie, J.F., Bond, R.A.B. **123**, 111

Propagation of Alfvén waves in an isothermal atmosphere when the displacement current is not neglected

Leroy, B. **125**, 371

Algol Systems, see Close Binaries

Revised Photometric Elements of the Eclipsing Binary EE Aquarii

Russo, G., Sollazzo, C. **107**, 197

Am Stars, see Metallic Line Stars

A Search for Medium *Z* Elements in the Ultraviolet Spectrum of κ Cancer

Davidson, J.P., Bord, D.J. **111**, 362

Andromeda Nebula, see M 31, Galaxies (individual)

Antimatter

Quasars and Cosmology

Fliche, H.H., Souriau, J.M. **78**, 87

Cosmic ray acceleration in supernova blast waves

Moraal, H., Axford, W.I. **125**, 204

Ap Stars, see Peculiar A Stars

Apex of Solar Motion, see Solar Motion

Artificial Satellites

Derivation of Positions and Parallaxes from Simulated Observations with a Scanning Astrometry Satellite

Hoyer, P., Poder, K., Lindegren, L., Hog, E. **101**, 228

Effects of the Earth-reflected sunlight on the orbit of the LAGEOS satellite

Anselmo, L., Farinella, P., Milani, A., Nobili, A.M. **117**, 3

Associations

The Structure of Gould's Belt

Strauss, F.M., Poeppel, W.G.L., Vieira, E.R. **71**, 319

- An Investigation of the Interstellar Extinction in 11 Selected Directions on the Carina-Crux-Centaurus Region of the Milky Way
Sundman, A. **72**, 379; **35**, 327
- Photometry of Loose Clusterings in the Southern Milky Way
Lodén, L.O. **73**, 366; **36**, 83
- Erratum: Photometry of Loose Clusterings in the Southern Milky Way
Lodén, L.O. **73**, 366; **36**, 485
- Possible Association Membership for the Three Long Period Cepheids RZ Velorum, SW Velorum, and KQ Scorpion
Turner, D.G. **76**, 350
- Physical Analysis of the Giant H II Regions IC 1805 and IC 1848
Vallée, J.P., Hughes, V.A., Viner, M.R. **80**, 186
- Continued Studies of Loose Clusterings in the Southern Milky Way
Lodén, L.O. **80**, 330; **38**, 355
- Anomalous Strength of the 2200 Å Feature in Cassiopeia-Taurus Association
Morales, C., Llorente de Andrés, F., Ruiz del Arbol, J.A. **85**, 302
- On the Initial Mass Function: The Mass Spectrum of Young OB Associations
Claudius, M., Grosbol, P.J. **87**, 339
- On the Sequential Formation of Subgroups in OB Associations
Bedijn, P.J., Tenorio-Tagle, G. **88**, 58
- Concluding Observations of Loose Stellar Clusterings in the Southern Milky Way
Lodén, L.O. **88**, 282; **41**, 173
- The Effect of Mass Loss on the Age-determination of Young Clusters, with an Application to the Orion OB-Association
Paerels, F.B.S., Lamers, H.J.G.L.M., de Loore, C. **90**, 204
- Studies of Ultraviolet Interstellar Extinction with the Sky-survey Telescope of the TD-1 Satellite. Results for Different OB-Associations
Morales, C., Llorente de Andrés, F., Ruiz del Arbol, J.A., Pérez Mollá, J. **91**, 379; **42**, 155
- Radio Emission from Cyg OB 2 No. 12
Wendker, H.J., Altenhoff, W.J. **92**, L5
- A 2.3 GHz Radio Continuum Map of the Upper Scorpio Region
Baart, E.E., de Jager, G., Mountfort, P.I. **92**, 156
- NGC 206, a Hole in M 31
Brinks, E. **95**, L1
- Neutral-hydrogen Emission Features in Scorpius and Ophiuchus and the Origin of SCO OB2
Olano, C.A., Pöppel, W.G.L. **95**, 316
- On the Structure and Typical Age of Certain Loose Clusterings in the Milky Way
Lodén, L.O. **98**, 71
- A Photometric Study of Two Stellar Clusterings in the Southern Milky Way (and a General Consideration on Previous and Present Data Concerning Galactic Clusterings)
Lodén, L.O. **99**, 205; **44**, 155
- A RV Digital Measuring Method Applied to LAC OB 1: Preliminary Results
Bijaoui, A., Lacoarret, M., Granes, P. **102**, 282; **45**, 483
- The Graphite Rich Cepheus OB 3 Association
Barsella, B., Panagia, N., Perinotto, M. **111**, 130
- The Gas Dynamics Around OB Associations. II. Dependence on the Initial Ambient Density
Tenorio-Tagle, G., Beltrametti, M., Bodenheimer, P., Yorke, H.W. **112**, 104
- Neutral hydrogen in the Cas OB6 association
Braunsfurth, E. **117**, 297
- Kinematical studies of open clusters and OB-associations from relative radial velocity observations. II. The Orion Belt region
Giesekeing, F. **118**, 102
- The Cygnus X region. XIII. The dark cloud between IC 1318 b and c
Wendker, H.J., Schramm, K.J., Dieckvoss, C. **121**, 69
- The absolute masses of 72 galactic clusters and 12 OB associations
Bruch, A., Sanders, W.L. **121**, 237
- A comparison of UV extinction in Sco OB2 and Per OB1 associations
Krelowski, J., Strobel, A. **127**, 271
- ### Asteroids
- The Close Approaches of the Minor Planet Eunomia to the Stars SAO 97745, 97645, and 97646
Haupt, H., Terzan, A., Bernard, A. **71**, 260
- Rotation Period and Phase Curve of the Asteroids 349 Dembowska and 354 Eleonora
Zappalà, V., Houten-Groeneveld, I. van, Houten, C.J. van **71**, 273; **35**, 213
- Photoelectric Photometry of Seven Asteroids
Van Houten-Groeneveld, I., Van Houten, C.J., Zappalà, V. **71**, 273; **35**, 223
- New Numerical Experiments to Deplete the Outer Part of the Asteroidal Belt
Froeschlé, C., Scholl, H. **72**, 246
- Rotation Period of the Minor Planet 337 Devosa: An Unusual Object with Triple Extrema in the Photoelectric Lightcurve
Schober, H.J. **72**, 379; **35**, 337
- Photoelectric Photometry and Rotation Periods of Three Large and Dark Asteroids: 49 Pales, 88 Thisbe and 92 Undina
Schober, H.J., Scaltriti, F., Zappalà, V. **73**, 364; **36**, 1
- Positions of Selected Minor Planets
Vaghi, S., Zappalà, V., Curir, A., de Sanctis, G., Ferreri, W., Bacchelli, L. **73**, 370; **36**, 309
- Positions of Asteroids at ESO-La Silla by Means of the GPO ($f=400$ cm, $d=40$ cm) in April 1978
Debehogne, H., Machado, L.E. **73**, 370; **36**, 313
- Minor Planets' Positions Obtained in September 1977 with the 25 cm ($f=1.70$ m) Astrographic Camera of the Observatorio Nacional do Brasil
Debehogne, H., Machado, L.E.S., Caldeira, J.F.C., Vieira, G.G., Netto, E.R. **75**, 260; **36**, 407
- A Survey for High-inclination Minor Planets
Schmadel, L.D., Schubart, J., Schuster, H.E., West, R.M. **76**, 130
- Photoelectric Lightcurves and Rotation Period of the Minor Planet 148 Gallia
Surdej, A., Surdej, J. **76**, 368; **37**, 467
- Photoelectric Observations of Two Unusual Asteroids: 1978 CA and 1978 DA
Schuster, H.E., Surdej, A., Surdej, J. **76**, 368; **37**, 483
- A Statistical Method for the Determination of Orbits of Asteroids and Satellites
Dvorak, R., Edelman, C. **77**, 320
- 387 Aquitania and 776 Berbericia: Two Slow Spinning Asteroids with Rotation Periods of Nearly One Day?
Schober, H.J. **77**, 372; **38**, 91
- On the Lightvariations of the C-type Asteroids 140 Siwa and 790 Pretoria
Schober, H.J., Stanzel, R. **78**, 251; **38**, 265

- UBV Photometry of the Asteroids 9 Metis, 87 Sylvia, and 247 Eukrate during Their Oppositions in 1978 with Respect to Light-curves
Schober, H.J., Surdej, J. **78**, 251; **38**, 269
- Long-period Effects in the Motion of Eighteen Trojan Asteroids and the Investigation of Special Problems of the 1/1 Resonance
Bien, R. **81**, 255
- The Asteroids 118 Peitho and 952 Caia: Rotation Periods and Light Curves from Photoelectric Observations
Stanzel, R., Schober, H.J. **81**, 387; **39**, 3
- New Monte Carlo Simulations of the Orbital Evolution of Short-period Comets and Comparison with Observations
Froeschlé, C., Rickman, H. **82**, 183
- Photoelectric Lightcurves and Rotation Period of 308 Polyxo, Obtained at ESO-La Silla in May 1978
Debehogne, H., Zappalà, V. **82**, 393; **39**, 163
- The Similarity of the Opposition Effect Among Asteroids
Scaltriti, F., Zappalà, V. **83**, 249
- Positions of Asteroids Obtained During 1977
Lagerkvist, C.I., de Sanctis, G., Zappalà, V. **84**, 269; **40**, 119
- Observations de petites planètes au GPO de l'ESO, La Silla, en avril 1979
Debehogne, H., de Freitas Mourão, R.R., Tavares, O. **85**, 266; **40**, 253
- Photoelectric Lightcurves and Rotation Period of the Large Asteroid 45 Eugenia
Debehogne, H., Zappalà, V. **85**, 267; **40**, 257
- Minor Planets Positions Obtained in April 1978 with the GPO ($D=40$ cm, $f=4$ M) of the ESO, La Silla
Debehogne, H., Vogt, N. **86**, 269; **40**, 371
- Beobachtung und Bahnverbesserung des kleinen Planeten (115) Thyra
Landgraf, W. **87**, 252; **41**, 17
- Minor Planets' Positions Obtained in April 1978 at Eso La Silla
Debehogne, H., Freitas Mourão, R.R. de, Tavares, O.C. **87**, 254; **41**, 109
- Positions of Asteroids Obtained with the Schmidt Telescope at the Uppsala Southern Station
Carlson, M., Hahn, G., Lagerkvist, C.-I. **87**, 254; **41**, 117
- Positions of Selected Minor Planets (1977-78-79)
Zappalà, V., de Sanctis, G., Ferreri, W. **88**, 282; **41**, 183
- Positions de cinq Astéroïdes en Août 1977
Debehogne, H., de Freitas Mourão, R.R., Chaves, O.L. **88**, 282; **41**, 187
- Rotation Period and Photoelectric Lightcurves of Asteroids 68 Leto and 563 Suleika
Surdej, J., Schober, H.J. **89**, 252; **41**, 335
- The Remaining Large Minor Planets with Unknown Rotational Properties: 31 Euphrosyne and 65 Cybele
Schober, H.J., Scaltriti, F., Zappalà, V., Harris, A.W. **91**, 1
- Positions d'Astéroïdes au GPO, ESO, La Silla, 1978, 1979
Debehogne, H., Machado, L.E., Caldeira, J.F., Vieira, G.G., Netto, E.R. **91**, 262; **42**, 81
- Photoelectric Lightcurves of the Asteroids 139 Juewa and 161 Athor, Obtained with the 50 cm Photometric Telescope at ESO, La Silla
Debehogne, H., Zappalà, V. **91**, 263; **42**, 85
- The Stochasticity of Peculiar Orbits in the 2/1 Kirkwood Gap
Froeschlé, C., Scholl, H. **93**, 62
- Positions d'astéroïdes, de grosses planètes et de la Lune
Soulié, G., Dupouy, Teulet, Broqua, Dulou **95**, 211; **43**, 146
- Rotation Period of 234 Barbara, a Further Slowly Spinning Asteroid
Schober, H.J. **96**, 302
- Photoelectric Light Curve of Pallas
van Houten-Groeneveld, I. **98**, 203
- Rotational Properties and Lightcurves of the Asteroids 679 Pax and 796 Sarita
Schober, H.J. **99**, 199
- Physical Studies of Asteroids. I: Photoelectric Observations of the Asteroids 38, 218, 268, 344, 485, 683, 690 and 792
Carlsson, M., Lagerkvist, C.-I. **99**, 202; **44**, 15
- Positions of Asteroids Obtained During 1975-1978 with the Kvistaberg Schmidt Telescope
De Sanctis, G., Zappalà, V., Lagerkvist, C.-I. **99**, 203; **44**, 43
- Positions of Asteroids Obtained with the Schmidt Telescope at the Uppsala Southern Station during 1978 and 1979
Hahn, G., Lagerkvist, C.-I., Svensson, B. **99**, 404; **44**, 317
- Photoelectric Photometry of the Asteroids 404 Arsinoe and 628 Christine
Schober, H.J. **100**, 311
- 14 Irene: A Puzzling Asteroid
Scaltriti, F., Zappalà, V., Schober, H.J., Hansmeier, A., Sudy, A., Piironen, J., Blanco, C., Catalano, S. **100**, 326
- Physical Studies of Asteroids II: Photoelectric Observations of the Asteroids 63, 93, 135 and 409
Lagerkvist, C.I. **100**, 332; **44**, 345
- The Size of 51 Nemausa
Kristensen, L.K. **100**, 332; **44**, 375
- Physical Studies of Asteroids III: The Rotation Period of 85 Io
Lagerkvist, C.I., Schober, H.J. **100**, 333; **44**, 401
- Physical Studies of Asteroids IV: Photoelectric Observations of the Asteroids 47, 95, 431
Carlsson, M., Lagerkvist, C.-I. **101**, 417; **45**, 1
- Minor Planets' Positions Obtained in May-June 1980 at the GPO Telescope of ESO La Silla - Two Discoveries
Debehogne, H., De Freitas Mourao, R.R., Tavares, O.C., Nunes, M. **101**, 418; **45**, 79
- Positions of Selected Minor Planets (1979-80)
Zappalà, V., De Sanctis, G., Ferreri, W. **101**, 419; **45**, 93
- Physical Studies of Asteroids V: Photoelectric Observations of the Asteroids 70, 101, 369 and 432
Lagerkvist, C.-I., Rickman, H. **102**, 279; **45**, 177
- Studies of small Asteroids I: Positions of Asteroids Obtained During August 1979 with the ESO Schmidt Telescope
Lagerkvist, C.-I. **103**, 207; **46**, 21
- Physical Studies of Asteroids VI: Asteroid 201 Penelope, a Fast Rotator
Lagerkvist, C.-I., Rickman, H., Scaltriti, F., Zappalà, V. **104**, 148
- Analysis of the Spin Rate Distribution of Asteroids
Farinella, P., Paolicchi, P., Zappalà, V. **104**, 159
- Evidence for Color Variations on the Surface of 3 Juno: New Photoelectric UBV-Observations
Schroll, A., Schober, H.J., Lagerkvist, C.-I. **104**, 296
- Quadruple Extrema in the Complex Lightcurve of the Asteroid 37 Fides?
Schober, H.J. **105**, 419
- Positions d'astéroïdes obtenues au GPO de 40 cm de l'ESO, La Silla, décembre 1979
Debehogne, H., Machado, L., Netto, E., Caldeira, J., Vieira, G. **106**, 180; **46**, 371

The Asteroids 36 Atalante and 48 Doris: Rotation, *UBV*-Photometry and Lightcurves

Schober, H.J., Schroll, A. **107**, 402

Positions of Asteroids Obtained During 1978

Zappalà, V., Lagerkvist, C.I., de Sanctis, G. **107**, 412; **47**, 447

Positions of the Minor Planets 102 Miriam, 1024 Hale and 1687 Glarona Obtained in May and June 1980 with the GPO, ESO, La Silla

Debehogne, H., Machado, L.E., Caldeira, J., Vieira, G., Netto, E.R. **107**, 413; **47**, 463

Studies of Small Asteroids. II. Positions of Asteroids Obtained During 1980 with the ESO Schmidt Telescope

Lagerkvist, C.I. **107**, 414; **47**, 513

Positions of Asteroids Obtained During 1976-1979 with the Uppsala Astrograph and with the Kvistaberg Schmidt Telescope

Pettersson, B., Hahn, G., Lagerkvist, C.I. **107**, 414; **47**, 533

Positions of Minor Planets (Text in French)

Soulié, G. **107**, 417; **47**, 611

Photoelectric Photometry of Three Dark Asteroids

Debehogne, H., De Sanctis, G., Zappalà, V. **108**, 197

A Revised Rotation Period for the Asteroid 164 Eva

Schober, H.J. **108**, 415; **48**, 57

Motion of the Jovian Commensurability Resonances and the Character of the Celestial Mechanics in the Asteroid Zone: Implications for Kinematics and Structure

Torbett, M., Smoluchowski, R. **110**, 43

Inertial Frame Determination Using Minor Planets. A Simulation of Hipparcos-observations

Söderhjelm, S., Lindegren, L. **110**, 156

Positions of Asteroids (1981)

Debehogne, H., De Sanctis, G., Zappalà, V. **110**, 182; **48**, 449

On the Reality of Minor Planet (330) Adalberta

West, R.M., Madsen, C., Schmadel, L.D. **110**, 198

A Systematic Exploration of Three-dimensional Asteroidal Motion at the 2/1 Resonance

Froeschlé, C., Scholl, H. **111**, 346

Photoelectric Observations of 44 Nysa During 1981 Opposition

Piironen, J.O. **112**, 172

Catalogue of Minor Planet Identities. I. Identities with Planets (1)-(2297)

Schmadel, L.D. **112**, 395; **49**, 691

Minor Planets Discoveries at the GPO, ESO-La Silla. Dependencies of Stars for Catalogue Improvement and Future Perturbation Studies

Debehogne, H. **112**, 396; **49**, 775

Three Characteristic Parameters of Orbits of Hilda-type Asteroids

Schubart, J. **114**, 200

Physical Studies of Asteroids. VII: The Unusual Rotation of M and CMEU Asteroids

Zappalà, V., Debehogne, H., Lagerkvist, C.-I., Rickman, H. **114**, 420; **50**, 23

Positions of Asteroids Obtained During August and September 1981 with the GPO Telescope at ESO, Chile

Debehogne, H., Hahn, G., Lagerkvist, C.-I. **114**, 420; **50**, 73

Positions of Selected Minor Planets (1980-1981)

De Sanctis, G., Ferreri, W., Zappalà, V. **114**, 421; **50**, 421

Physical Studies of Asteroids. VIII. Photoelectric Photometry of the Asteroids 42, 48, 93, 105, 145, and 245

Debehogne, H., Lagerkvist, C.-I., Zappalà, V. **115**, 218; **50**, 277

The Six-day Rotation Period of 1689 Floris-Jan: A New Record Among Slowly Rotating Asteroids

Schober, H.J., Surdej, J., Harris, A.W., Young, J.W. **115**, 257

On Asteroid Classifications in Families

Carusi, A., Valsecchi, G.B. **115**, 327

A check for the pole coordinates of asteroid 22 Kalliope

Barucci, M.A., Dipaolantonio, A. **117**, 1

Rotation periods and lightcurves of the asteroids 136 Austria and 238 Hypatia

Schober, H.J. **117**, 362

Positions of asteroids (1981, Part II)

Debehogne, H., De Sanctis, G., Zappalà, V. **118**, 208; **51**, 37

Minor planet positions obtained at Cerro Calán Observatory during 1978-1980

Wroblewski, H., Torres, C., Barros, S., Wischnjewsky, M. **118**, 209; **51**, 93

How to maintain the spatial distribution of interplanetary dust

Leinert, C., Röser, S., Buitrago, J. **118**, 345

Studies of small asteroids. III. Positions of asteroids obtained during September 1978 with the ESO Schmidt telescope

Lagerkvist, C.-I., Carlsson, I.-M. **119**, 166; **51**, 341

Rotation properties of the high-numbered asteroids 1236 Thais and 1317 Silvette

Schober, H.J., Schroll, A. **120**, 106

Speckle interferometry observations of the asteroids Juno and Amphitrite

Baier, G., Weigelt, G. **121**, 137

UBV photometry of the minor planets 86 Semele, 521 Brixia 53 Kalypso and 113 Amalthea

Surdej, J., Surdej, A., Louis, B. **121**, 329; **52**, 203

The light curves of a freely precessing spheroidal minor planet

Barsuhn, J. **122**, 237

Remarkable modification of light curves for shadowing effects on irregular surfaces: the case of the asteroid 37 Fides

Zappalà, V., Di Martino, M., Scaltriti, F., Burchi, R., Milano, L., Young, J.W., Wahlgren, G., Pavlovski, K. **123**, 326

The large C-type asteroids 146 Lucina and 410 Chloris and the small S-type asteroids 152 Atala and 631 Philippina: rotation periods and lightcurves

Schober, H.J. **124**, 153; **53**, 71

Lightcurves and rotation periods for the asteroids 70 Panopaea and 235 Carolina

Schroll, A., Schober, H.J. **124**, 153; **53**, 77

Physical studies of asteroids. XI. Photoelectric observations of the asteroids 2, 161, 216, and 276

Carlsson, M., Lagerkvist, C.-I. **124**, 155; **53**, 157

The large C-type asteroid 423 Diotima: rotation period, lightcurve and implications for a possible satellite

Schober, H.J. **127**, 301

Positions of asteroids obtained with the CERGA Schmidt telescope

Hahn, G., Heudier, J.L., Lagerkvist, C.I. **127**, 426; **54**, 191

Jovian satellites and asteroid positions observed at la Silla-GPO. Comparison of different bijections

Debehogne, H. **128**, 262; **54**, 365

Photoelectric lightcurves and rotation period of the minor planet 201 Penelope

Surdej, J., Louis, B., Cramer, N., Rufener, F., Waelkens, C., Barbier, R., Birch, P.V. **128**, 262; **54**, 371

Astrolabe Measurements, see Astrometry, Latitude Observations, Time Observations

Solar diameter measurements (Text in French)

Laclare, F. **125**, 200

Analysis of solar observations made with the CERGA astrolabe (Text in French)

Bougeard, M., Chollet, F., Laclare, F. **126**, 161

Observations of Jupiter with the astrolabe of the CERGA Observatory (February 1980-May 1981)

Vigouroux, G., Dugonon, G., Granès, P., Mignard, F., Pham-Van, J. **126**, 221; **53**, 361

Astrometry, see also Latitude Observations, Time Observations

On the Reduction Model of Astrographic Plates

von der Heide, K. **72**, 324

Corrections to the Paper "Observations of Mars' Position with the Paris Astrolabe (1975-1976)"

Débarbat, S. **73**, 364; **36**, 9

Observations of Uranus Made with the Danjon Astrolabe of Santiago, Chile, during 1977

Noël, F., Contreras, K., Repetur, H. **73**, 370; **36**, 307

Positions of Selected Minor Planets

Vaghi, S., Zappalà, V., Curir, A., de Sanctis, G., Ferreri, W., Bacchelli, L. **73**, 370; **36**, 309

Positions of Asteroids at ESO-La Silla by Means of the GPO ($f=400$ cm, $d=40$ cm) in April 1978

Debehogne, H., Machado, L.E. **73**, 370; **36**, 313

Accurate Astrometric Positions of Pluto, 1975-1978

Jensen, K.S. **75**, 260; **36**, 395

Observations of Mars with the Astrolabe at Paris Observatory during the Winter 1977-1978

Débarbat, S., Lam, S.K., Texier, P., Tomas, M., Vanhollebeke, J. **75**, 260; **36**, 399

Results of Observations Made at Valinhos with the Astrolabe. Time and Latitude 1974 to 1977

Benevides, P., Boczek, R., Clauzet, L.B.F., Leister, N.V. **75**, 260; **36**, 401

Minor Planets' Positions Obtained in September 1977 with the 25 cm ($f=1.70$ m) Astrographic Camera of the Observatorio Nacional do Brasil

Debehogne, H., Machado, L.E.S., Caldeira, J.F.C., Vieira, G.G., Netto, E.R. **75**, 260; **36**, 407

On the Observations of the Mutual Phenomena of the Galilean Satellites in 1979

Arlot, J.-E., Morando, B., Thuillot, W. **76**, L9

Reduction of Observations of the Comet P/Ashbrook-Jackson at ESO La Silla by Means of GPO ($F=400$ cm, $D=40$ cm) in April 1978

Debehogne, H., Machado, L.E. **76**, 368; **37**, 467

Observations of Mars Position with the Paris Astrolabe

Débarbat, S. **76**, 368; **37**, 475

A new Method of Orbit Calculation for Double Stars

Valbousquet, A. **77**, 159

Erratum: General Catalogue of FK 4 Stars Observed with Astrolabes (1958-1975)

Billaud, G., Guallino, G., Vigouroux, G. **77**, 369

Erratum: Additional Information to the Paper "Ephemerides and Position of Mars 1975-1976"

Débarbat, S., Pham Van, J., Sanchez, M. **77**, 370

Definitive Results of Observations Concerning the Right Ascensions of FK 4 Supplementary Stars

Jackson, P., Polnitzky, G. **77**, 372; **38**, 89

Positions of Jupiter and Four Satellites Obtained in 1978 at ESO-La Silla by Means of the GPO ($f=400$ cm, $d=40$ cm)

Debehogne, H., Machado, L.E. **78**, 251; **38**, 275

On the Discrepancy between the Optical and Radio Position of SS 433

de Vegt, Chr., Gehlich, U.K. **79**, L16

The New Photographic Astrolabe at the Turku Observatory

Niemi, A. **80**, 174

A Determination and Possible Explanation of a General Magnitude Equation Between the FK 4 and Southern Catalogues of Observations

Schwan, H. **84**, 251

Space Astrometry of Nearby Stars

Fracastoro, M.G. **84**, 266

Observations photographiques de Mars, de Jupiter et de ses satellites ainsi que de Saturne, effectuées en 1978 à l'astrographe double de 40 cm de l'Observatoire royal de Belgique

Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **85**, 266; **40**, 249

Precise Optical Positions of Radio Sources in the Southern Hemisphere

Walter, H.G., West, R.M. **86**, 1

Galilean Satellite Positions Using Image Photometric Analysis

Arlot, J.-E. **86**, 55

Effect of Building Design on Photographic Zenith Tube Observations

Rafferty, T.J. **86**, 262

Observations photographiques de Jupiter et ses satellites, effectuées en 1977 à l'astrographe double de 40 cm de l'Observatoire Royal de Belgique

Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **86**, 269; **40**, 363

Membership in the Open Cluster NGC 6494. Astrometry with a PDS Microdensitometer

Sanders, W.L., Schröder, R. **88**, 102

Observations of Mars à l'Astrolabe Danjon de San Fernando durant l'hiver 1977-1978

Sánchez, M., Fernández, J.B., Parra, F., Navas, F.J. **88**, 283; **41**, 215

Atmospheric Limitations of Narrow-field Optical Astrometry

Lindgren, L. **89**, 41

Investigation of Diameter Corrections of the Brorfelde Transit Circle

Fabricius, C., Helmer, L., Fogh Olsen, H.J. **89**, 57

On the Derivation of a Catalogue of Radio Source Positions from Interferometric Observations

Walter, H.G. **89**, 198

Astrometric Study of the Uranus Satellite Miranda

Veillet, C., Ratier, G. **89**, 342

Precise Optical Positions of Southern Radio Sources

Wroblewski, H., Costa, E., Torres, C. **93**, 245

Determination of Division Corrections

Benevides-Soares, P., Boczek, R. **96**, 127

Mars around 1975 and 1978 Oppositions

Débarbat, S., Sanchez, M. **96**, 193

Westerbork Observations of Radio Sources in the 5 GHz 'S4' Survey

Kapahi, V.K. **97**, 416; **43**, 381

Positions of 100 Southern Bright Circumpolar Stars

Hoyer, P.J. **99**, 205; **44**, 151

Cinq premières campagnes d'observations systématiques de β Persei à l'Astrolabe de l'Observatoire de Paris

Débarbat, S., Chollet, F., Clauzet, L.B.F., Feissel, M., Lam, S.K., Texier, P., Tomas, M., Vanhollebeke, J. **99**, 401; **44**, 189

Three Colour Observations of Southern Red Variable Giant Stars

Wisse, P.N.J. **99**, 403; **44**, 273

- Two Differing Definitions of the Dynamical Equinox and the Mean Obliquity
Standish, E.M., Jr. **101**, L17
- Compact Radio Sources at Declinations $> 67^\circ$
Waltman, E., Johnston, K.J., Spencer, J.H., Pauliny-Toth, I., Schraml, J., Witzel, A. **101**, 49
- An Improved Optical Position of 3C 273B in the FK4-system
de Vegt, Chr., Gehlich, U.K. **101**, 191
- Derivation of Positions and Parallaxes from Simulated Observations with a Scanning Astrometry Satellite
Hoyer, P., Poder, K., Lindegren, L., Hog, E. **101**, 228
- Minor Planets' Positions Obtained in May-June 1980 at the GPO Telescope of ESO La Silla - Two Discoveries
Debehogne, H., De Freitas Mourao, R.R., Tavares, O.C., Nunes, M. **101**, 418; **45**, 79
- Location of Faint Objects in the Orbits of Thetys and Dione
Veillet, C. **102**, L5
- Remark on the Computation of Position Angle and Distance From Standard Coordinates
Eichhorn, H. **102**, 35
- Recursive Estimation of the Reduction Parameters of an Astrometric Plate
Fresneau, A. **102**, 143
- Optical Position and "Proper Motion" of the Radio Source OQ 208
Brosche, P., Geffert, M. **103**, 78
- Observations du Soleil en 1979 à l'astrolabe du Cerga
Laclare, F., Glentzlin, M. **103**, 207; **46**, 1
- Investigation of Systematic Differences between the New Washington Catalogs W5-50 und WL50, the Perth 70 and the AGK3R in their Common Zone of Overlap, Declinations -5° to $+5^\circ$
Corbin, T., de Vegt, C. **104**, 88
- The Magnitude Equations between the Fundamental Coordinate Systems N30, FK3, FK4
Schwan, H. **104**, 155
- Optical Positions for Northern Stellar Planetary Nebulae
Blackwell, S.R., Purton, C.R. **104**, 169; **46**, 181
- Résultats des observations faites à Paris avec l'astrolabe. Temps et latitude 1979-1980
Chollet, F., Débarbat, S. **104**, 170; **46**, 249
- Optical Positions of Benchmark Radio Sources South of $+5^\circ$ Declination
West, R.M., Walter, H.G. **104**, 171; **46**, 277
- On the Setting Errors of the Angle Standard of the Circumzenithal Instrument and of the Astrolabe
Niemi, A. **104**, 276
- The Short Term Stability of the Brorfelde Transit Circle
Fabritius, C. **105**, 413
- Positions d'astéroïdes obtenues au GPO de 40 cm de l'ESO, La Silla, décembre 1979
Debehogne, H., Machado, L., Netto, E., Caldeira, J., Vieira, G. **106**, 180; **46**, 371
- The Orbits of the Visual Double Stars ADS 10621 and ADS 15650
Morel, P.-J. **106**, 378; **47**, 217
- Photometric and Astrometric Observations of Close Visual Binaries
Rakos, K.D., Albrecht, R., Jenkner, H., Kreidl, T., Michalke, R., Oberlerchner, D., Santos, E., Schermann, A., Schnell, A., Weiss, W. **106**, 379; **47**, 221
- Determination of the Equinox and Equator of the FK5
Fricke, W. **107**, L13
- New Constants for the Sampson-Lieske Theory of the Galilean Satellites of Jupiter
Arlot, J.-E. **107**, 305
- New Photographic Method for the Measurement of Visual Binaries
Scardia, M., Pannunzio, R. **107**, 362
- Positions of Asteroids Obtained During 1978
Zappalà, V., Lagerkvist, C.I., de Sanctis, G. **107**, 412; **47**, 447
- Positions of the Minor Planets 102 Miriam, 1024 Hale and 1687 Glarona Obtained in May and June 1980 with the GPO, ESO, La Silla
Debehogne, H., Machado, L.E., Caldeira, J., Vieira, G., Netto, E.R. **107**, 413; **47**, 463
- Accurate Positions and Standard D_{25} Diameters for Galaxies in the Central Part of the Coma Cluster (Text in French)
Patrel, G., Perie, M., Rousseau, M. **107**, 413; **47**, 467
- Observations of Uranus Made with the Danjon Astrolabe of Santiago, Chile, During 1979
Noël, F., Barros, S. **107**, 413; **47**, 481
- Studies of Small Asteroids. II. Positions of Asteroids Obtained During 1980 with the ESO Schmidt Telescope
Lagerkvist, C.I. **107**, 414; **47**, 513
- Positions of Asteroids Obtained During 1976-1979 with the Uppsala Astrograph and with the Kvistaberg Schmidt Telescope
Pettersson, B., Hahn, G., Lagerkvist, C.I. **107**, 414; **47**, 533
- Orbits of 16 Visual Binaries
Heintz, W.D. **107**, 415; **47**, 569
- Positions of Minor Planets (Text in French)
Soulié, G. **107**, 417; **47**, 611
- Comments on Determination of Division Corrections
Branham, L., Jr. **108**, L5
- VLBI Observations of 12 Compact Radio Sources North of Declination 70°
Eckart, A., Hill, P., Johnston, K.J., Pauliny-Toth, I.I.K., Spencer, J.H., Witzel, A. **108**, 157
- Accurate Optical Positions of Isolated Galaxies
Brosch, N. **108**, 415; **48**, 63
- On the Discrepancy Between the Optical and Radio Position of T Tauri
de Vegt, C. **109**, L15
- Comparison of Precise Optical and Radio Positions for Cyg OB2 Members and P Cyg
de Vegt, C. **109**, 282
- Inertial Frame Determination Using Minor Planets. A Simulation of Hipparcos-observations
Söderhjelm, S., Lindegren, L. **110**, 156
- Observations of the Sun at the CERGA Astrolabe in 1980 (Text in French)
Laclare, F., Glentzlin, M., Leister, N.V., Chollet, F. **110**, 181; **48**, 371
- New Double Stars (17th Series) Discovered at Nice (Text in French)
Couteau, P. **110**, 182; **48**, 443
- Positions of Asteroids (1981)
Debehogne, H., De Sanctis, G., Zappalà, V. **110**, 182; **48**, 449
- Danjon Astrolabe Observations at Rio de Janeiro: Time and Latitude
Andrei, A.H., d'Àvila, V.A., Penna, J.L., Queiroz, M. **110**, 183; **48**, 485
- On the Reality of Minor Planet (330) Adalberta
West, R.M., Madsen, C., Schmadel, L.D. **110**, 198
- Interferometric Measurements of Stellar Positions in the Infrared
Sutton, E.C., Subramanian, S., Townes, C.H. **110**, 324

Meridian Observations Made in Brorfelde (Copenhagen University Observatory) 1969-1975. Positions of 6427 Stars Brighter than 11.00 vis.mag.

Helmer, L., Fogh Olsen, H.J. **111**, 209; **49**, 13

Observations of Mars with the Astrolabe of the CERGA Observatory (February 1980 - May 1980) (Text in French)

Pham-Van, J., Dugonon, G., Granès, P., Mignard, F., Vigouroux, G. **111**, 211; **49**, 105

Observations of Jupiter with the Astrolabe of the CERGA Observatory (January 1978 - May 1979) (Text in French)

Vigouroux, G., Delmas, C., Guallino, G., Mignard, F., Pham-Van, J. **111**, 211; **49**, 107

A New Method of Determination of the Pole Motion in a Uniform System

Takagi, S. **112**, 11

Observation of 2 Mutual Events Involving the Satellites of Saturn in April 1980

Dourneau, G. **112**, 73

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1981

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **112**, 179; **49**, 509

Orbital Elements of Nereid from New Observations

Veillet, C. **112**, 277

Minor Planets Discoveries at the GPO, ESO-La Silla. Dependences of Stars for Catalogue Improvement and Future Perturbation Studies

Debehogne, H. **112**, 396; **49**, 775

Precise Optical Positions of Radio Sources in the FK 4-system. II. Results from 28 Sources on the Northern Hemisphere and a Preliminary Comparison of the Optical-Radio Reference Frame

de Vegt, C., Gehlich, U.K. **113**, 213

Accurate Optical Positions of M 82 Knots

Bettoni, D., Galletta, G. **113**, 344

Experiences with the U.S. Naval Observatory Glass Circles

Rafferty, T.J., Klock, B.L. **114**, 95

Improved Orbital Elements for Periodic Comet Schorr (1918 III)

de Vegt, C., Kohoutek, L., Marsden, B.G. **114**, 147

ADS 3230: Two Possible Solutions in the Computation of the Orbital Elements (Text in French)

Scardia, M. **114**, 419; **50**, 19

Effect of Different Sources of Variation of Latitude Data on Meridian Circle Catalogues

Rafferty, T.J. **114**, 420; **50**, 27

Measurements of Double Stars Made in Nice. Orbits of Three Binary Stars (Text in French)

Couteau, P. **114**, 420; **50**, 49

Positions of Asteroids Obtained During August and September 1981 with the GPO Telescope at ESO, Chile

Debehogne, H., Hahn, G., Lagerkvist, C.-I. **114**, 420; **50**, 73

Measures of Southern Double Stars in 1981

Wilson, R.H., Jr. **114**, 421; **50**, 115

Positions of Selected Minor Planets (1980-1981)

De Sanctis, G., Ferreri, W., Zappalà, V. **114**, 421; **50**, 421

Conversion of Positions and Proper Motions from B 1950.0 to the IAU System at J 2000.0

Standish, E.M., Jr. **115**, 20

A Pool of Faint Stars Applied to Star Catalogue Formation

Hering, R., Walter, H.G. **115**, 197

The Fourth Meridian Catalogue of Besançon Observatory (Text in French)

Crézé, M., Mazodier, B., Clairemidi, J., Colin, J., Considère, S., Hilaire, G., Oblak, E., Parisot, J.P., Puel, F., Andrez, R. **115**, 216; **50**, 147

An Accurate Derivation of the Division Corrections in a Photoelectric Meridian Circle

Miyamoto, M., Kühne, C. **115**, 216; **50**, 173

Results of Observations Made in Paris with the Astrolabe (Text in French)

Chollet, F., Débarbat, S., Hascoët, J.C., Lam, S.K., Texier, P., Tomas, M. **115**, 217; **50**, 195

The Connection of a Catalogue of Stars with an Extragalactic Reference Frame

Froeschlé, M., Kovalevsky, J. **116**, 89

Seeing-independent Definitions of the Solar Limb Position

Brown, T.M. **116**, 260

Optical positions of four Benchmark radio sources

Geffert, M., Richtler, T. **118**, 201

Positions of asteroids (1981, Part II)

Debehogne, H., De Sanctis, G., Zappalà, V. **118**, 208; **51**, 37

Photographic measures of visual double stars

Pannunzio, R., Morbidelli, R. **118**, 208; **51**, 63

Positions, magnitudes and colors for stars in the globular cluster M15

Buonanno, R., Buscema, G., Corsi, C.E., Iannicola, G., Fusi Pecci, F. **118**, 209; **51**, 83

Minor planet positions obtained at Cerro Calán Observatory during 1978-1980

Wroblewski, H., Torres, C., Barros, S., Wischnjewsky, M. **118**, 209; **51**, 93

A virial mass determination of the open cluster NGC 6494

McNamara, B.J., Sanders, W.L. **118**, 361

Results of observations made with the Astrolabe of Santiago from 1977 to 1980

Noël, F. **119**, 164; **51**, 219

Studies of small asteroids. III. Positions of asteroids obtained during September 1978 with the ESO Schmidt telescope

Lagerkvist, C.-I., Carlsson, I.-M. **119**, 166; **51**, 341

The magnitude equation in right ascension between the FK 4 and recent catalogues of southern observations

Bien, R., Schwan, H. **119**, 307

Astrometric positions of Pluto from 1980 to 1982

Zappalà, V., De Sanctis, G., Ferreri, W. **119**, 324; **51**, 385

Provisional orbital elements of visual binary stars ADS 1360 and ADS 3082 (text in French)

Scardia, M. **119**, 324; **51**, 417

Precise optical positions for radio/optical astrometric sources in the southern hemisphere

Costa, E., Torres, C., Wroblewski, H. **119**, 324; **51**, 425

Orbital elements for eleven visual binaries (text in French)

Baize, P. **119**, 325; **51**, 479

Membership in the open cluster NGC 6709

Hakkila, J., Sanders, W.L., Schröder, R. **119**, 326; **51**, 541

Star transits with a photoelectric micrometer applied to the transit instrument of Torino Observatory

Anderlucci, E., Chiumiento, G., Fracastoro, M.G., Iervolino, R. **121**, 142

A new automatic meridian circle PMC 190

Kühne, C. **121**, 165

Photographic observations of visual double stars

van Albada-van Dien, E. **121**, 329; **52**, 193

Observations of the Sun at the CERGA astrolabe in 1981

Laclare, F., Glentzlin, M. **121**, 330; **52**, 265

Meridian circle observations of FK 4 radio stars

Carrasco, G., Costa, E., Loyola, P. **121**, 330; **52**, 279

New optical positions and proper motions of late type stars associated with SiO masers

Soulié, G., Baudry, A. **121**, 331; **52**, 299

Observation of faint stars by a slit micrometer

Høg, E. **122**, 57

Sanduleak-Pesch's twin white dwarf object

Schnell, A., Purgathofer, A. **122**, 325

Corrections for the gravitational deflection of light in the case of observations with an astrolabe

Li, Z.X. **123**, 22

First astrolabe catalogue of Rio de Janeiro

Andrei, A.H., D'Avila, V.A., Nascimento, J.O., Penna, J.L., Queiroz, M. **123**, 358; **52**, 373

The first astrolabe catalogue at Valinhos

Clauzet, L.B.F. **123**, 359; **52**, 403

Investigation of the systematic errors of the Belgrade NPZT and AGK 3 catalogues

Sadžakov, S., Dačić, M., Fomin, V.A. **123**, 360; **52**, 455

Positions, magnitudes, and colors for stars in the globular cluster M 92

Buonanno, R., Buscema, G., Corsi, C.E., Iannicola, G., Smriglio, F., Fusi Pecci, F. **124**, 151; **53**, 1

Time and latitude results of observations made at Merate Observatory with the astrolabe for the year 1982

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **124**, 152; **53**, 43

Micrometric measurements of southern double stars

Argyle, R.W. **124**, 155; **53**, 177

Flux density monitoring of radio stars observable by Hipparcos at S-Band and X-Band

Estalella, R., Paredes, J.M., Rius, A. **124**, 309

Positions of stars in regions of 14 southern galactic clusters

Andersen, T.B., Reiz, A. **125**, 175; **53**, 181

Meridian observations made with the Carlsberg Automatic Meridian Circle at Brorfelde (Copenhagen University Observatory) 1981-1982

Helmer, L., Fabricius, C., Einicke, O.H., Thoburn, C. **125**, 176; **53**, 223

381 astrometric positions of minor planets obtained at the GPO telescope of ESO, La Silla, February/March, 1981

Debehogne, H., Machado, L.E., Caldeira, J.F., Vieira, G.G., Netto, E.R., Le Van Suu, A. **127**, 424; **54**, 47

Variable stars: how accurate will be their astrometric measurements by HIPPARCOS?

Mennessier, M.O., Guibert, J. **128**, 69

Conversion matrix of epoch B 1950.0 FK 4-based positions of stars to epoch J 2000.0 positions in accordance with the new IAU resolutions

Aoki, S., Sôma, M., Kinoshita, H., Inoue, K. **128**, 128

Astronomical Constants

Precession Matrix Based on IAU (1976) System of Astronomical Constants

Lieske, J.H. **73**, 282

The New Definition of Universal Time

Aoki, S., Guinot, B., Kaplan, G.H., Kinoshita, H., McCarthy, D.D., Seidelmann, P.K. **105**, 359

On the Invariable Plane of the Solar System

Burkhardt, G. **106**, 133

Determination of the Equinox and Equator of the FK5

Fricke, W. **107**, L13

Inertial Frame Determination Using Minor Planets. A Simulation of Hipparcos-observations

Söderhjelm, S., Lindegren, L. **110**, 156

Orientation of the JPL Ephemerides, DE 200/LE 200, to the Dynamical Equinox of J 2000

Standish, E.M., Jr. **114**, 297

Atlases

Spectral Atlas of Helium-rich Stars

Kaufmann, J.P., Theil, U. **88**, 284; **41**, 271

An Atlas of the Shell Spectrum of Pleione Between 3167 Å and 4924 Å

Ballereau, D. **89**, 251; **41**, 305

The Spectrum of FG Sge in 1979-1980. I. $\lambda\lambda$ 3700-5000 Å

Acker, A., Jaschek, M., Gleizes, F. **110**, 181; **48**, 363

An Atlas of Southern and Equatorial Dwarf Novae

Vogt, N., Bateson, F.M. **110**, 182; **48**, 383

The ESO Quick Blue Survey and ESO (B) Atlas

West, R.M., Schuster, H.-E. **112**, 180; **49**, 577

A photometric atlas of the spectrum of γ Tauri $\lambda\lambda$ 5186-8700 Å

Appelquist, L., Andersen, J., Fisher, W.A., Fletcher, J.M., Kjaergaard, P. **121**, 330; **52**, 237

Atmospheres, see Earth Atmosphere, Planetary Atmospheres, Solar Atmospheres, Stellar Atmospheres

Atomic and Molecular Data, see also Collisions, Energy Levels, Line Broadening, Transition Probabilities

N III Lines for Solar Diagnostics

Nussbaumer, H., Storey, P.J. **71**, L5

Approximations for Proton Excitation: Erratum and Extension

Kastner, S.O., Bhatia, A.K. **71**, 211

Fe XXI as an Electron Density Diagnostic in Solar Flares

Mason, H.E., Doschek, G.A., Feldman, U., Bhatia, A.K. **73**, 74

C III Observable with IUE

Nussbaumer, H., Schild, H. **75**, L17

New Atomic Data for O^{+2}

Bhatia, A.K., Doschek, G.A., Feldman, U. **76**, 359

Charge Exchange of N^{3+} Ions with Atomic Hydrogen in the Interstellar Gas

McCarroll, R., Valiron, P. **78**, 177

New Atomic Data for Si^{+6} , S^{+8} and Ar^{+10}

Bhatia, A.K., Feldman, U., Doschek, G.A. **80**, 22

 b_n Factors at Low Temperatures

Ungerechts, H., Walmsley, C.M. **80**, 325

Proton Collisional Excitation in the Ground Configuration of Positive Ions in the $2p^2$ Isoelectronic Series

Faucher, P., Masnou-Sewu, F., Prudhomme, M. **81**, 137

Charge Transfer Reactions in Some Astrophysical Situations

Péquignot, D. **81**, 356

Excitation of C II Lines by Photoionization of Neutral Carbon

Hofmann, H., Treffitz, E. **82**, 256

Charge Transfer Reactions. II. A Photoionization Model of the Planetary Nebula NGC 7662

Péquignot, D. **83**, 52

The Oscillator Strengths and the Dissociation Energy of SiH^+ as Determined from Time Resolved Precision Spectroscopy

Carlson, T.A., Copley, J., Durić, N., Elander, N., Erman, P., Larsson, M., Lyyra, M. **83**, 238

- Chebyshev Approximations of Atomic Partition Functions for Rareearth Elements
Van Diest, H. **83**, 378
- New Atomic Data for Fe^{+19}
Bhatia, A.K., Mason, H.E. **83**, 380
- Spectra of the $3s^2 3p^n - 3s 3p^{n+1}$ Transition Arrays Emitted from Nickel and Cobalt Ions
Fawcett, B.C., Hatter, A.T. **84**, 78
- Charge Transfer of C^+ and S^+ in Diffuse Nebulae
Butler, S.E., Dalgarno, A. **85**, 144
- Electron Impact Excitation Cross Sections for O III
Ganas, P.S. **85**, 267; **40**, 259
- Atomic Data for SiV and Solar Observations of the $3s^2 3p^2 P-3s 3p^2 ^4P$ Multiplet
Bhatia, A.K., Doschek, G.A., Feldman, U. **86**, 32
- Heliumlike Ion Line Intensities IV. Z-dependence of Collision Strengths for $n=2 \rightarrow n=1$ Transitions in Helium- and Hydrogenlike Ions
Mewe, R., Schrijver, J., Sylwester, J. **87**, 55
- The Interpretation of C V and O VII Emission Line Ratios in the Sun
Doyle, J.G. **87**, 183
- On the $2s^2 S-2p^2 P^0$ Resonance Lines of O VI and the $2s^2 ^1S_0-2s 2p^3 P_1$ Intercombination Line of O V
Brown, C.M. **88**, 273
- Lyman- and Balmer-like Transitions for the Hydrogen Atom in Strong Magnetic Fields
Wunner, G., Ruder, H. **89**, 241
- Atomic Data for Fe II
Nussbaumer, H., Storey, P.J. **89**, 308
- Charge Transfer of Ne^{2+} with Helium
Dalgarno, A., Butler, S.E., Heil, T.G. **89**, 379
- Proton Excitation Rates for Fine Structure Transitions in C III, O V, and Ne VII in the Sun
Doyle, J.G., Kingston, A.E., Reid, R.H.G. **90**, 97
- Wavelengths and Profiles of the $[\text{S III}] \ ^3P_{2,1} - ^1D_2$ Lines in Some Emission Nebulae
Hippelein, H., Münch, G. **95**, 100
- Hydrogen Atom in Strong Magnetic Fields: Polynomial Approximations for the Magnetic-field Dependence of the Energy Values
Wunner, G., Ruder, H. **95**, 204
- Autoionization of Si II and the Spectrum of Magnetic Ap Stars
Artru, M.C., Jamar, C., Petrini, D., Praderie, F. **96**, 380
- O III: Intercombination and Forbidden Lines
Nussbaumer, H., Storey, P.J. **99**, 177
- Charge Exchange and Fine Structure Excitation in 0-D^+ Collisions
Roueff, E. **99**, 394
- Autoionized Levels and Oscillator Strengths for Si II
Artru, M.C., Jamar, C., Petrini, D., Praderie, F. **99**, 401; **44**, 171
- Collisional I-mixing of Rydberg States of Carbon Due to Thermal Energy Charged Particles
Dickinson, A.S. **100**, 302
- Semiempirical Stark Linewidths of Alkali Like Ions
Dimitrijević, M.S., Konjević, N. **102**, 93
- Lifetime Measurements in Cr I by Laser Excitation from Metastable States
Kwiatkowski, M., Micali, G., Werner, K., Zimmermann, P. **103**, 108
- Atomic Calculation for Fe XXIII, UV, and X-ray Lines
Bhatia, A.K., Mason, H.E. **103**, 324
- Fast Neutron Capture on ^{180}Hf and ^{184}W and the Solar Hafnium and Tungsten Abundance
Beer, H., Käppeler, F., Wisshak, K. **105**, 270
- Charge Transfer Ionization of Si^+ by H^+ at Thermal Energies
Gargaud, M., McCarroll, R., Valiron, P. **106**, 197
- Hyperfine Structure Measurement in Sc II
Arnesen, A., Hallin, R., Nordling, C., Staaf, Ö., Ward, L., Jelénković, B., Kisielinski, M., Lundin, L., Mannervik, S. **106**, 327
- Absolute Transition Probabilities in the Spectra of Eu I and Eu II. II. Line Intensity Measurements
Karner, C., Meyer, G., Träger, F., zu Putlitz, G. **107**, 161
- The Solar Spectrum of O IV, Including Photoexcitation by Fe IX 171.07 Å
Kastner, S.O. **108**, 361
- Tentative Identification of CS^+ in Comets
Singh, P.D. **108**, 369
- Astronomical Study of the C_3N and C_4H Radicals: Hyperfine-Interactions and Rho-type Doubling
Guélin, M., Friberg, P., Mezaoui, A. **109**, 23
- The Collision Strength for the N III λ 1750 Transition
Nussbaumer, H., Storey, P.J. **109**, 271
- [Ni II] Emission Under Nebular Conditions
Nussbaumer, H., Storey, P.J. **110**, 295
- The Theoretical KLL + KLM Auger Spectrum of the Free Na Atom
Petrini, D. **111**, 279
- Analysis of Fe I Lines ($0.00 \text{ eV} < \chi < 12.6 \text{ eV}$) in the Solar Spectrum Using Improved Damping Constants and Accurate Oscillator Strengths: Test of a Solar Model Atmosphere
Simmons, G.J., Blackwell, D.E. **112**, 209
- On the Variation of Stark Line Widths Within a Supermultiplet
Dimitrijević, M.S. **112**, 251
- New Lifetime Measurements for Nb I and Rh I and the Solar Photospheric Abundances of Nb and Rh
Kwiatkowski, M., Zimmermann, P., Biémont, E., Grevesse, N. **112**, 337
- Forbidden Emission Lines of Fe VII
Nussbaumer, H., Storey, P.J. **113**, 21
- NH⁺ - A Candidate for Comets and Interstellar Space
de Almeida, A.A., Singh, P.D. **113**, 199
- Electron Densities from the O IV λ 1401 Multiplet
Nussbaumer, H., Storey, P.J. **115**, 205
- Coronal Line Intensities for Ions with Fine-structured Ground States: Si X
Saha, H.P., Treffitz, E. **116**, 224
- Experimental Stark Broadening Data of Si II and Si III Lines
Kusch, H.J., Schröder, K. **116**, 255
- Cross sections for photo-ionisation and photo-recombination of hydrogenic atoms in strong magnetic fields
Wunner, G., Ruder, H., Herold, H., Schmitt, W. **117**, 156
- Vibration-rotation transition probabilities for the ground electronic $X^1\Sigma^+$ state of HD
Abgrall, H., Roueff, E., Viala, Y. **117**, 172; **50**, 505
- On the errors of the Kurucz-Peytremann Fe I oscillator strengths
Irwin, A.W. **117**, 173
- The O III/O II problem in medium and high excitation planetary nebulae
Che, A., Köppen, J. **118**, 107
- Dielectronic satellite spectra of Mg XI with inner-shell and helium-like excitation rates. Application to solar observations
Faucher, P., Loulergue, M., Steenman-Clark, L., Volonté, S. **118**, 147

- Fourier spectroscopy of the $^{12}\text{C}^{13}\text{C}$ and $^{13}\text{C}_2$ Phillips system
Amiot, C., Verges, J. **119**, 164; **51**, 257
- A laboratory study of the infrared spectra of interstellar ices
Hagen, W., Tielens, A.G.G.M., Greenberg, J.M. **119**, 324; **51**, 389
- Oscillator strengths and Ne abundance in B stars
Magazzù, A., Pirronello, V., Strazzulla, G. **120**, 139
- The nuclear hyperfine structure of deuterated ammonia
Bester, M., Urban, S., Yamada, K., Winnewisser, G. **121**, L13
- Arc measurements of Fe II transition probabilities
Moity, J. **121**, 163; **52**, 37
- Atomic calculations for Ca XVII: UV and X-ray lines
Bhatia, A.K., Mason, H.E. **121**, 163; **52**, 115
- Atomic calculations for the Fe XX X-ray lines
Mason, H.E., Bhatia, A.K. **121**, 164; **52**, 181
- Determination of natural radiative lifetimes of the $5p^2P$ state in Ga I and $6p^2P$ state in In I using a pulsed dye laser
Zaki Ewiss, M.A., Snoek, C., Dönszelmann, A. **121**, 327
- Status of laboratory experiments on ice mixtures and on the 12 μm H_2O ice feature
Kitta, K., Krätschmer, W. **122**, 105
- Half-widths of neutral fluorine spectral lines
Vujnović, V., Vadla, Č., Lokner, V., Dimitrijević, M.S. **123**, 249
- The O IV infrared and ultraviolet flux ratios as temperature and density diagnostics
Hayes, M.A., Nussbaumer, H. **124**, 279
- Dielectronic recombination at low temperatures
Nussbaumer, H., Storey, P.J. **126**, 75
- Excitation of C II lines by photoionization of neutral carbon
Hofmann, H., Saha, H.P., Treffitz, E. **126**, 415
- Estimated Stark widths and shifts of neutral atom and singly charged ion resonance lines
Lakićević, I.S. **127**, 37
- Stark broadening of hydrogen lines: new results for the Balmer lines and astrophysical consequences
Stehlé, C., Mazure, A., Nollez, G., Feautrier, N. **127**, 263
- Aurora**
- Solar Activity Cycle during Classical Antiquity
Stothers, R. **77**, 121
- B Stars**, see also Early Type Stars
- Luminosity and T_{eff} Determinations for B-type Stars
Cramer, N., Maeder, A. **78**, 305
- Carbon, Nitrogen, and Oxygen Abundances in Loose Association and Field B-type Stars
Kane, L., McKeith, C.D., Dufton, P.L. **84**, 115
- Catalogue of Photometric Data Related to Surface Magnetic Fields for B-type Stars
Cramer, N., Maeder, A. **87**, 254; **41**, 111
- Relation between Surface Magnetic Field Intensities and Geneva Photometry
Cramer, N., Maeder, A. **88**, 135
- Evidence for Autoionization and Dielectronic Recombination of Si II in the Atmospheres of B-type Stars
Underhill, A.B. **97**, L9
- Determination of Microturbulent Velocities in Early-type Stars
Dufton, P.L., Durrant, A.C., Durrant, C.J. **97**, 10
- Geneva [U, B, V] Intrinsic Colours of B-type Stars
Cramer, N. **112**, 330
- Equivalent Widths of Spectral Lines in B-type Stars (Text in French)
Didelon, P. **115**, 217; **50**, 199
- Shell and Photosphere of σ Ori E: New Observations and Improved Model
Groote, D., Hunger, K. **116**, 64
- Far ultraviolet colors of B and Be stars
Zorec, J., Briot, D., Divan, L. **126**, 192
- The distance, temperature, and luminosity of the hypergiant P Cygni (B1 Ia⁺)
Lamers, H.J.G.L.M., de Groot, M., Cassatella, A. **128**, 299
- Observed and computed spectral distribution of early-type stars. II. Determination of T_e for B5-A0 stars
Malagnini, M.L., Faraggiana, R., Morossi, C. **128**, 375
- Background Radiation**, see also Galactic Structure, Interstellar Radiation Field
- Cosmic Distances from X-ray and Microwave Observations of Clusters of Galaxies
Cavaliere, A., Danese, L., Zotti, G. **75**, 322
- Quasar Number Counts and the X-ray Background
Setti, G., Woltjer, L. **76**, L1
- The Luminosity Function of Seyfert 1 Galaxy Nuclei and BL LAC Objects, and the X-ray Background
Véron, P. **78**, 46
- Visibility of Pregalactic Fluctuations and an Upper Limit on q_0
Bode, M.F., Evans, A. **78**, 78
- How Can We Measure the Extragalactic Infrared Background?
Fabbri, R., Melchiorri, F. **78**, 376
- Constraints to Non-thermal Source Syntheses of X-ray Background
Cavaliere, A., Danese, L., De Zotti, G., Franceschini, A. **79**, 169
- On the Extragalactic Nature of the Far-ultraviolet Background
Jakobsen, P. **81**, 66
- Point Source Contributions to the Extreme Ultraviolet Background
Stern, R., Bowyer, S. **83**, L1
- On Distortions in the Rayleigh-Jeans Region of the Cosmic Background Radiation Spectrum
Danese, L., De Zotti, G. **84**, 364
- X-ray Background and Discrete, Evolving Sources
Cavaliere, A., Danese, L., De Zotti, G., Franceschini, A. **85**, L9
- The Anisotropic Microwave Background in Bianchi V Models
Schmitt, J.H.M.M. **87**, 236
- Observational Tests of the Cosmic Turbulence Theory
Danese, L., De Zotti, G. **87**, 303
- The Nature of the UV Radiation Background
Maucherat-Joubert, M., Deharveng, J.M., Cruvellier, P. **88**, 323
- Entropy Perturbations and Cosmogonic Processes in the Hot Universe
Chernin, A.D., Zentsova, A.S. **89**, 1
- On the Nature of the Faint (B - 20) Ultraviolet Excess Objects and the Problem of the X-ray Background
Bonoli, F., Braccisi, A., Marano, B., Merighi, R., Zitelli, V. **90**, L10
- Upper Limits on the Hubble Modulus Anisotropy Provided by Cosmic-microwave Background Observations
Dominguez-Tenreiro, R. **93**, 306
- Dipole Anisotropy and Distortions of the Spectrum of the Cosmic Microwave Background
Danese, L., De Zotti, G. **94**, L33

Interstellar Hot Plasma Contributions to the Diffuse Ultraviolet Background

Jakobsen, P., Paresce, F. **96**, 23

Constraints to the QSO Contribution to the X-ray Background

Cavaliere, A., Danese, L., de Zotti, G., Franceschini, A. **97**, 269

The Correlation Between Diffuse Far Ultraviolet Background and Line of Sight Hydrogen Column: Dust Scattering and H₂ Fluorescence

Jakobsen, P. **106**, 375

Double Compton Process and the Spectrum of the Microwave Background

Danese, L., De Zotti, G. **107**, 39

Contribution of the Warm Intercloud Medium to the Diffuse Ultraviolet Background

Deharveng, J.M., Joubert, M., Barge, P. **109**, 179

Ultraviolet Spectrum of the Sky Background at Different Galactic Latitudes

Zvereva, A.M., Severny, A.B., Granitzky, L.V., Hua, C.T., Cruvellier, P., Courtès, G. **116**, 312

The contribution of quasi-stellar objects to the cosmic X-ray background

Narlikar, J.V., Burbidge, G. **118**, 154

Radio source contributions to small-scale anisotropies of the microwave background

Danese, L., De Zotti, G., Mandolesi, N. **121**, 114

Large-scale anisotropy of the 3 K background radiation in density wave models

Fabbri, R., Guidi, I., Natale, V. **122**, 151

Ionization curves and last scattering surfaces in neutrino-dominated universes

Bonometto, S., Lucchin, F., Occhionero, F., Vittorio, N. **123**, 118

The spectral features in the microwave background spectrum due to energy release in the early Universe

Lyubarsky, Y.E., Sunyaev, R.A. **123**, 171

Far ultraviolet observations of the expanding shell in Eridanus

Paresce, F., Jakobsen, P., Bowyer, S. **124**, 300

A search for microwave background diminution towards the cluster 0016+16

Andernach, H., Schallwich, D., Sholomitski, G.B., Wielebinski, R. **124**, 326

Observational limits on adiabatic theories of galaxy formation from microwave background data

Bonometto, S.A., Caldara, A., Lucchin, F. **126**, 377

UV background radiation, dust and gas at high galactic latitude

Joubert, M., Masnou, J.L., Lequeux, J., Deharveng, J.M., Cruvellier, P. **128**, 114

Erratum: Large-scale anisotropy of the 3 K background radiation in density wave models

Fabbri, R., Guidi, I., Natale, V. **128**, 438

Barium Stars

Implications of the Barium Abundance in Metal Rich Ba II Stars

Rocca-Volmerange, R., Audouze, J. **75**, 371

Spectrum analysis of the barium stars HD 83548 and HD 65699

Kovács, N. **124**, 63

Barr Effect, see Spectroscopic Binaries

Barred Spiral Galaxies, see also Galaxies, Spiral Galaxies

A Correlation Between the Lengths of Bars and the Sizes of Bulges

Athanassoula, E., Martinet, L. **87**, L10

Star Formation and Activity in the Nuclei of Barred Galaxies

Heckman, T.M. **88**, 365

Orbits in Weak and Strong Bars

Contopoulos, G., Papayannopoulos, Th. **92**, 33

Radio Continuum of the Barred Spiral Galaxy NGC 5383 at Centimetre Wavelengths

Gräbe, R., Klein, U., Wielebinski, R. **95**, 391

Bar Instability and Rotation Curves

Sellwood, J.A. **99**, 362

The Effects of Resonances near Corotation in Barred Galaxies

Contopoulos, G. **102**, 265

Inner Lindblad Resonance in Galaxies. Nonlinear Theory. IV. Self-Consistent Bars

Contopoulos, G. **104**, 116

Kinematics and Dynamics of the Barred Spiral Galaxy NGC 1313

Marcelin, M., Athanassoula, E. **105**, 76

Photometry, kinematics, and dynamics of the barred spiral galaxy NGC 5383

Duval, M.F., Athanassoula, E. **121**, 297

Orbits as building blocks of a barred galaxy model

Athanassoula, E., Bienaymé, O., Martinet, L., Pfenniger, D. **127**, 349

Interpretation of the non-circular motion near the galactic center

Rohlf, K. **128**, 426

Be Stars, see also Emission Line Stars

Analysis of Rapid Variations in the Spectra of α Col by Cross Correlation

Bijaoui, A., Doazan, V. **73**, 285

The Butterfly Nebula M 2-9: Its Possible Relation to B [e] Stars and/or to Protoplanetary Nebulae

Swings, J.P., Andrillat, Y. **74**, 85

Rapid Variations in the Polarization of the Be Star γ Cas

Pirola, V. **78**, 250; **38**, 193

Observations of the Mid-ultraviolet Spectrum of Peculiar A and B Stars and of Be Stars, Bn Stars, and Shell Stars

Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **82**, 48

On the Shell Spectrum of 48 Librae

Garcia-Alegre, M.C., Lopez Arroyo, M. **83**, 163

IUE Observations of the Be Stars HD 102567 (4U1145-61), X Per and γ Cas

Hammerschlag-Hensberge, G., van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., de Loore, C., Glencross, W., Howarth, I., Willis, A.J., Wilson, R., Menzies, J. **85**, 119

Absolute Ultraviolet Spectrophotometry with the TD-1 Satellite. XI. Spectrophotometric Study of Be and Shell Stars with the S 2/68 Experiment

Beckmans, F., Hubert-Delplace, A.M. **86**, 72

Correlations Between Line-profile and Photometric Variations in the B2IV [e] Star HD 45677

Swings, J.P., Barbier, R., Klutz, M., Surdej, A., Surdej, J. **90**, 116

Ultraviolet, Optical and Infrared Observations of the Herbig Be Star HD 200775

Altamore, A., Baratta, G.B., Cassatella, A., Grasdalen, G.L., Persi, P., Viotti, R. **90**, 290

A Classification of Be Stars

Jaschek, M., Hubert-Delplace, A.-M., Hubert, H., Jaschek, C. **91**, 263; **42**, 103

Low-dispersion Spectral Classification and UBV Photographic Photometry of H α -Emission Objects in the Coalsack Region

Martinez, R.E., Muzzio, J.C., Waldhausen, S. **91**, 380; **42**, 179

Interpretation of Emission Line Profiles of Rotating Shells

Pöllitsch, G.F. **97**, 175

Photoelectric Scanner Measurements of Balmer Emission Line Profiles for Southern Be stars. II. A Survey for Variations

Dachs, J., Eichendorf, W., Schleicher, H., Schmidt-Kaler, Th., Stift, M., Tüg, H. **97**, 417; **43**, 427

Effects of Stellar Rotation in the Near Ultraviolet Spectrum of Early Type Stars. The Intrinsic Reddening Effect and the Be Phenomenon

Llorente de Andrés, F., Muñoz, F., López Arroyo, M., Morales, C. **98**, 418

The Recent Peculiar Behaviour of the Be Star, HD 200120, 59 Cyg

Hubert-Delplace, A.M., Hubert, H. **99**, 204; **44**, 109

A Photometric and Spectroscopic Study of He 3-640 ($\lambda = A$ 1118-61)

Janot-Pacheco, E., Ilovaisky, S.A., Chevalier, C. **99**, 274

Ultraviolet Observations of 27 Canis Majoris, π Aquarii and 48 Librae

Ringuelet, A.E., Fontenla, J.M., Rovira, M. **100**, 79

Influence of the Envelope in the Variations of Transitory Type Be Stars

Peton, A. **101**, 96

Calculated X-Radiation from Optically Thin Plasmas IV. Atomic Data and Rate Coefficients for Spectra in the Range 1-270 Å

Mewe, R., Gronenschild, E.H.B.M. **101**, 417; **45**, 11

The Optical Counterpart of A0538-66

Pakull, M., Parmar, A. **102**, L1

Infrared Lines of O I and Ca II in Be Stars with Paschen Emission Lines

Briot, D. **103**, 1

Paschen Lines in Be Stars. II. Study of Paschen Emission Lines

Briot, D. **103**, 5

Spectroscopic and Photometric Observations of the Be Star 69 Orionis

Bossi, M., Guerrero, G., Mantegazza, L., Rusconi, L., Scardia, M., Sedmak, G. **104**, 169; **46**, 173

An Usually Short Stable Period of Absorption Line Asymmetries and V/R Variations in the Spectrum of the Be Star 28 CMA

Baade, D. **105**, 65

On the Spectrum of the Herbig Be Star HD 200775

Baschek, B., Beltrametti, M., Köppen, J., Traving, G. **105**, 300

Erratum: Paschen Lines in Be Stars. II. Study of Paschen Emission Lines

Briot, D. **105**, 422

Erratum: Infrared Lines of O I and Ca II in Be Stars with Paschen Emission Lines

Briot, D. **105**, 422

Infrared Photometry of Southern Be Stars

Dachs, J., Wamsteker, W. **107**, 240

UV and Visible Photometry of the Brightest Pleiades Stars

Golay, M., Mauron, N. **107**, 415; **47**, 547

Analysis of the IUE and Optical Spectra of the Peculiar Be Star HD 87643

de Freitas Pacheco, J.A., Gilra, D.P., Pottasch, S.R. **108**, 111

Study of H₂ Profile in 72 Be Stars

Andrillat, Y., Fehrenbach, Ch. **108**, 416; **48**, 93

Stellar Content of Young Open Clusters. II. Be Stars

Mermilliod, J.-C. **109**, 48

Does 28 CMA Have a Photometric Period Differing from Its Spectroscopic Period?

Baade, D. **110**, L15

On the Balmer Emission Lines of the Herbig Be Star HD 200775

Köppen, J., Finkenzeller, U., Mundt, R., Beltrametti, M. **112**, 174

Properties and Nature of Be and Shell Stars. 7 B.88 Her - An Important Clue to Understanding the Be Phenomenon?

Doazan, V., Harmanec, P., Koubsky, P., Krpata, J., Zdarsky, F. **115**, 138

Properties and nature of Be and shell stars. 7 A.88 Her: observational data, their reduction and basic evaluation

Doazan, V., Harmanec, P., Koubsky, P., Krpata, J., Zdarsky, F. **117**, 172; **50**, 481

The frequency of Be stars

Jaschek, C., Jaschek, M. **117**, 357

Search for light variability of LSI + 61°303

Bartolini, C., Custodi, P., Dell'Atti, F., Guarnieri, A., Piccioni, A. **118**, 365

Evidence for outburst in the shell star 17 Lep derived from ultraviolet spectra

Molaro, P., Morossi, C., Ramella, M. **119**, 160

The ultraviolet reddening of Be stars

Schild, R. **120**, 223

Envelope structure of the cyclic V/R variable shell stars

Hubert-Delplace, A.M., Mon, M., Ungerer, V., Hirata, R., Paterson-Beeckmans, F., Hubert, H., Baade, D. **121**, 174

Can shell phases of Be stars be predicted on the basis of rapid spectroscopic micro-variability?

Baade, D. **124**, 283

A Be type variation in an O star

Divan, L., Zorec, J., Andrillat, Y. **126**, L8

Far ultraviolet colors of B and Be stars

Zorec, J., Briot, D., Divan, L. **126**, 192

Second catalogue of H α line profiles in 55 Be star spectra

Andrillat, Y. **126**, 220; **53**, 319

The definition of T Tauri and Herbig Ae/Be stars

Bastian, U., Finkenzeller, U., Jaschek, C., Jaschek, M. **126**, 438

On the rapid spectral variability of Be-stars: high spectral resolution study of γ Cas, ϕ Per, and 59 Cyg

Chalabae, A., Maillard, J.P. **127**, 279

The long-term variations of γ Cas in the visual

Doazan, V., Franco, M., Rusconi, L., Sedmak, G., Stalio, R. **128**, 171

Beta Canis Majoris Stars

53 Piscium, a Confirmed β CMA Variable Star

Sareyan, J.-P., Le Contel, J.-M., Ducatel, D., Valtier, J.-C. **72**, 313

Ultraviolet Photometry with the Astronomical Netherlands Satellite (ANS). Observation of β Canis Majoris Variables

Lesh, J.R., Wesselius, P.R. **79**, 115

Ultraviolet Observations of β CMA Stars: List of Basic Data Obtained with the TD-1 A Satellite

Burger, M., Beeckmans, F., Kamperman, T.M. **83**, 383; **39**, 301

The Ultraviolet Spectrum of β Canis Majoris Stars

Burger, M., de Jager, C., Kamperman, T.M., Neven, L. **90**, 170

Beta Cephei Stars

Photometry of the Beta Cephei Star HD 80383

Haug, U. **80**, 119

On the Period-luminosity Relation of β Cephei Stars

Jakate, S.M. **84**, 374

Copernicus Observations of β Cephei Stars

Hutchings, J.B., Hill, G. **91**, 264; **42**, 135

- The Period-Luminosity Relation for β Cephei Stars in the Geneva Photometric System
Waelkens, C. **97**, 274
- Frequency Analysis of Photometric Observations of the β Cephei Star ν Eridani
Cuyppers, J., Goossens, M. **102**, 282; **45**, 487
- An Usually Short Stable Period of Absorption Line Asymmetries and V/R Variations in the Spectrum of the Be Star 28 CMa
Baade, D. **105**, 65
- The Pulsation of the Outer Layers of the Beta Cephei-type Variable BW Vul
Burger, M., de Jager, C., van den Oord, G.H.J., Sato, N. **107**, 320
- Profile Variations of the Si III (4452 and 4568) Lines and Mg II (4481) Doublet in γ Peg
Le Contel, J.-M., Morel, P.-J. **107**, 406
- The Pulsation of the Outer Layers of the Beta Cephei Star σ Sco
Burger, M., de Jager, C., van den Oord, G.H.J. **109**, 289
- Frequency Analyses of Light and Radial Velocity Observations of α Lup
Lampens, P., Goossens, M. **115**, 413
- A spectrographic study of the β Cephei star 16 Lacertae
Le Contel, J.-M., Ducatel, D., Jarzembowski, T., Jerzykiewicz, M., Valtier, J.-C. **118**, 294
- HD 129929: a multiperiodic pulsating early-type star at intermediate galactic latitude
Waelkens, C., Rufener, F. **119**, 279
- An observational study of the influence of close companions on the pulsations of β Cephei stars
Waelkens, C., Rufener, F. **121**, 45
- The β Cephei eclipsing binary system 16 Lacertae
Garrido, R., Sareyan, J.-P., Gimenez, A., Valtier, J.-C., Delgado, A.J., Le Contel, J.-M., Ducatel, D. **122**, 193
- Far ultraviolet colors of β Cephei stars
Zorec, J., Briot, D., Divan, L. **126**, 205
- Phase dispersion minimization period analysis of the β Cephei star β Crucis
Cuyppers, J. **127**, 186
- On the variability of θ Vel
Haefner, R., Wuensch, J. **127**, 413
- Beta Lyrae Stars**, see Eclipsing Binaries
- Ultraviolet Observations of the Be Star and X-ray Binary 4U 1145-61 (= HD 102567 = Hen 715) obtained with the IUE
de Loore, C., Burger, M., Hensberge, H., Van Dessel, E.L. **104**, 150
- Binary Stars**, see also Cataclysmic Variables, Close Binaries, Double Stars, Eclipsing Binaries, Spectroscopic Binaries, Symbiotic Stars, W Ursae Majoris Stars, X-ray Binaries
- Formation of Neutron Star Binaries and Their Importance for Gravitational Radiation
Clark, J.P.A., van den Heuvel, E.P.J., Sutantyo, W. **72**, 120
- Fourier Deconvolution of Electronographic Images
Hawkins, M.R.S. **76**, 46
- The Orbital Evolution of Close Triple Systems: The Binary Eccentricity
Mazeh, T., Shaham, J. **77**, 145
- The Influence of Stellar Wind on the Evolution of Massive Binaries with an Application to Massive X-ray Binaries
Vanbeveren, D., De Grève, J.P. **77**, 295
- The Inductive Generation of the Magnetic Field in Binary Systems
Dolginov, A.Z., Urpin, V.A. **79**, 60
- Minimum Projection in Eccentric Binary Orbits
Mammano, A. **79**, 204
- Stationary Solutions and Their Stability in the Magnetic-binary Problem when the Primaries are Oblate Spheroids
Mavraganis, A. **80**, 130
- An Early-type Binary Model for SS 433
van den Heuvel, E.P.J., Ostriker, J.P., Pettersen, J.A. **81**, L7
- The Effects of Binary Evolution on the Production of Heavy Elements in Massive Stars
Vanbeveren, D., Olson, G.L. **81**, 228
- Optical Spectra of HDE 245770 = A 0535 + 26
Giangrande, A., Giovannelli, F., Bartolini, C., Guarneri, A., Piccioni, A. **86**, 267; **40**, 289
- The Variation of the CNO Abundances in Massive Binary Systems: an Application to Wolf-Rayet Stars
Vanbeveren, D., Doom, C. **87**, 77
- A Simple Means of Detecting Cepheid Binaries
Fernie, J.D. **87**, 227
- On the Binary Frequency Distribution and Evolution of Wolf-Rayet Stars
Vanbeveren, D., Conti, P.S. **88**, 230
- HD 113001: Photometric Separation
Goy, G. **88**, 370
- Does the Binding Energy of Binaries Masquerade as Missing Mass?
Wesson, P.S. **90**, 1
- Speckle Interferometric Measurements of Binary Stars
Bonneau, D., Blazit, A., Foy, R., Labeyrie, A. **91**, 380; **42**, 185
- Slightly Detached Binaries as Calibrators of the Main-Sequence
Wilson, R.E., Rafert, J.B. **91**, 380; **42**, 195
- Stability of Tidal Equilibrium
Hut, P. **92**, 167
- On the Nature of the 125-day Cepheid V 810 Cen (= HR 4511): IUE Spectra
Eichendorf, W., Heck, A., Isserstedt, J., Lub, J., Pakull, M., Reipurth, B., van Genderen, A.M. **93**, L5
- The Effects of an Undetected Duplicity on Spectroscopic Analyses of Main-sequence Stars
Barambon, C., Jousson, M. **96**, 189
- Binaries in Open Clusters. II. Discrimination Between Double and Rotating Stars
Trimble, V.L., Ostriker, J.P. **97**, 403
- A Catalogue of Variable-visual Binary Stars
Proust, D., Ochsenbein, F., Pettersen, B.R. **99**, 401; **44**, 179
- On the Nature of the Two Supergiant Components in the System of V 810 Cen = HR 4511 = HD 101947
van Genderen, A.M. **100**, 175
- Explosive Mass Loss in Binary Stars: the Two Time-scale Method
Hut, P., Verhulst, F. **101**, 134
- On the Possibility of Detecting Companions to Cepheids and Their Effect on the CORS Method
Russo, G., Sollazzo, C., Coppola, M. **102**, 20
- Erratum: Binaries in Open Clusters. II. Discrimination Between Double and Rotating Stars
Trimble, V.L., Ostriker, J.P. **102**, 142
- Statistical Models for Spectroscopic and for Eclipsing Binary Stars
Halbwachs, J.L. **102**, 191
- Statistical Method for Calculating Parallaxes and Masses of Binaries with Unknown Orbits
Couteau, P. **102**, 313

- Multiplicity and Absolute Magnitudes of Wolf-Rayet Stars in the Large Magellanic Cloud
Prévot-Burnichon, M.L., Prévot, L., Rebeiro, E., Rousseau, J., Martin, N. **103**, 83
- On the Period of the Interacting Binary UW Canis Majoris
Herczeg, T., Drechsel, H., Rahe, J. **104**, 256
- On the Evolutionary Scenario of Massive Close Binaries with Primary Masses Between 20 M_{\odot} and 160 M_{\odot}
Vanbeveren, D. **105**, 260
- Some Constraints on the Evolutionary History of the Binary Pulsar PSR 1913 + 16
Srinivasan, G., van den Heuvel, E.P.J. **108**, 143
- The Variable, Single-line WN8 Star HD 86161: Another Wolf-Rayet Star with a Low-mass Companion
Moffat, A.F.J., Niemela, V.S. **108**, 326
- Detached \rightarrow Contact Scenario for the Origin of WUMa Stars
Vilhu, O. **109**, 17
- New Double Stars (17th Series) Discovered at Nice (Text in French)
Couteau, P. **110**, 182; **48**, 443
- Dissipative Evolution of Collisionless Stellar Systems. I. Cooling and Heating of a Stellar System by Binary Stars
Ozernoy, L.M., Dokuchaev, V.I. **111**, 1
- Dissipative Evolution of Collisionless Stellar Systems. II. Influence of Binaries on the Evolution of Globular Clusters and Galactic Nuclei
Dokuchaev, V.I., Ozernoy, L.M. **111**, 16
- The Detection of Compact Companions in OB-runaway Stars
Sybesma, C.H.B., de Loore, C. **111**, 229
- Contact Binaries: Angular Momentum Loss In and Out of Contact
Rucinski, S.M. **112**, 273
- Shock Fronts in Wide Binary Systems
Huang, R.Q., Weigert, A. **112**, 281
- Spectral Variations of Two Cool Ap Stars: HD 25354 and HD 152107
Floquet, M. **112**, 299
- The Fastest Runaway Wolf-Rayet Star of Population I in the Galaxy, 209 BAC: Evidence for a Low Mass Companion
Moffat, A.F.J., Lamontagne, R., Seggewiss, W. **114**, 135
- Contribution to the Study of Composite Spectra. III. Spectrum Binaries: Intermediate Class Between Visual and Spectroscopic Binaries? (Text in French)
Carquillat, J.M., Nadal, R., Ginestet, N., Pedoussaut, A. **115**, 23
- On the Difference Between the Initial Mass Function of Single Stars and of Primaries of Binaries
Vanbeveren, D. **115**, 65
- Detection of a late B star companion of the bright cluster giant c Pup = HD 63032
Groote, D., Reimers, D. **119**, 319
- Statistics of binary stars: eclipse depths
Giuricin, G., Mardirossian, F., Mezzetti, M. **121**, 42
- On the variability of the two brightest stars in the galactic cluster IC 2391
Waelkens, C., Rufener, F. **121**, 162; **52**, 21
- Sanduleak-Pesch's twin white dwarf object
Schnell, A., Purgathofer, A. **122**, 325
- Binarity and the local stellar mass density
Mezzetti, M., Giuricin, G., Mardirossian, F. **122**, 333
- Nineteen new spectroscopic binaries and the rate of binary stars among F-M supergiants
Burki, G., Mayor, M. **124**, 256
- The equations that govern rotational and tidal perturbations of stellar oscillations
Smeyers, P., Martens, L. **125**, 193
- The disk-star boundary layer and its effect on the accretion disk structure
Regev, O. **126**, 146
- Micrometric measurements of binary stars (first list)
Scardia, M. **126**, 223; **53**, 433
- New double stars (18th series) discovered at Nice
Couteau, P. **126**, 223; **53**, 441
- The binary nature of the central star of the planetary nebula LT-5
Schnell, A., Purgathofer, A. **127**, L5
- Physical properties and evolution of the two white dwarfs in the Sanduleak-Pesch binary
Greenstein, J.L., Dolez, N., Vauclair, G. **127**, 25
- Magnetic braking and tidal energy dissipation in close binaries
Verbunt, F., Hut, P. **127**, 161
- Micrometer measurements of visual binaries
Morel, P.J. **127**, 423; **54**, 39
- Statistics of categorized eclipsing binary systems. Lightcurve shapes, periods, and spectral types
Giuricin, G., Mardirossian, F., Mezzetti, M. **128**, 260; **54**, 211
- Binaries among the bright stars: estimation of the bias and study of the main-sequence stars
Halbwachs, J.L. **128**, 399
- BL Lacertae Objects**
- Westerbork Observations of Flat Spectrum Radio Galaxies in the 5 GHz "S4" Survey
Kapahi, V.K. **74**, L11
- The Luminosity Function of Seyfert I Galaxy Nuclei and BL Lac Objects, and the X-ray Background
Véron, P. **78**, 46
- Radio Continuum Observations of Markarian Galaxies at 1410, 2380, and 5000 MHz
Biermann, P., Clarke, J.N., Fricke, K.J., Pauliny-Toth, I.I.K., Schmidt, J., Witzel, A. **81**, 235
- An Extreme Fell Emitter: the Narrow Line Quasar PHL 1092
Bergeron, J., Kunth, D. **85**, L11
- The Radio Fine Structure of the BL Lacertae Objects AO0235 + 164, 0735 + 178, BL Lac, 1749 + 701, Mk 421, and 3C 66 A at 5 GHz
Baath, L.B., Elgered, G., Lundqvist, G., Graham, D.A., Weiler, K.W., Seielstad, G.A., Tallqvist, S., Schilizzi, R.T. **96**, 316
- UV Observations of the New BL Lac Object 0716 + 71
Fricke, K.J., Kollatschny, W., Schleicher, H. **100**, 1
- The Appearance of Broad Emission Lines in the Spectrum of BL Lac Object PKS 0521-36
Ulrich, M.H. **103**, L1
- Optical Brightness Variations of BL Lac Objects
Zekl, H., Klare, G., Appenzeller, I. **103**, 342
- The Properties of AP Librae from UBV Photoelectric Photometry
Westerlund, B.E., Wlérick, G., Garnier, R. **105**, 284
- The Photometric History of the BL Lacertae Object OJ 287
Gaida, G., Röser, H.-J. **105**, 362
- VLBI Observations of 12 Compact Radio Sources North of Declination 70°
Eckart, A., Hill, P., Johnston, K.J., Pauliny-Toth, I.I.K., Spencer, J.H., Witzel, A. **108**, 157
- A Rapid Outburst of BL Lac at 2.72 GHz
Reich, W., Steffen, P. **113**, 348
- Optical spectroscopy of flat spectrum radio sources
Fricke, K.J., Kollatschny, W., Witzel, A. **117**, 60

The nature of the nebula around BL Lacertae

Rakos, K.D., Fiala, N. **124**, L11

Quasi-simultaneous ultraviolet and optical observations of PKS 2155-304 = H 2155-304

Maraschi, L., Tanzi, E.G., Tarengi, M., Treves, A. **125**, 117

Quasi-simultaneous optical and UV observations of OJ 287 during an active period in 1983

Maraschi, L., Tanzi, E.G., Treves, A., Falomo, R. **127**, L17

Black Holes

Highly Compact Binary X-ray Sources

Joss, P.C., Rappaport, S. **71**, 217

Gamma Rays from Accretion Onto Rotating Black Holes

Collins, M.S. **74**, 108

Image of a Spherical Black Hole with Thin Accretion Disk

Luminet, J.-P. **75**, 228

Is There a Second Set of Shifted Lines in SS 433?

Amitai-Milchgrub, A., Shaham, J. **77**, L7

Cygnus X-1 - a Neutron Star Surrounded by a Massive Disk?

Kundt, W. **80**, L7

Primordial Black Holes

Novikov, I.D., Polnarev, A.G., Starobinsky, A.A., Zeldovich, Ya.B. **80**, 104

Supercritical Disc Accretion on to Black Holes: Quasars and Type 1 Seyferts

Jones, B.C., Raine, D.J. **81**, 128

Observational Consequences of Positron Production by Evaporating Black Holes

Okeke, P.N., Rees, M.J. **81**, 263

Accretion of Gas by a Schwarzschild Black Hole

Ray, D. **82**, 368

Adiabatic Accretion onto a Schwarzschild Black Hole

Brinkmann, W. **85**, 146

Accretion and Radiation Spectrum of the Gas Debris of a Star Disrupted by the Tidal Forces of a Massive Black Hole

Gurzadyan, V.G., Ozernoy, L.M. **86**, 315

Thick Accretion Disks and Supercritical Luminosities

Paczynski, B., Wiita, P.J. **88**, 23

The Penrose Photoproduction Scenario for NGC 4151; (PCS-SSC). A Black Hole γ -ray Emission Mechanism for Active Galactic Nuclei and Seyfert Galaxies

Leiter, D. **89**, 370

On the Growth of Primordial Black Holes

Bettwieser, E., Glatzel, W. **94**, 306

Profile of a Line Emitted by an Accretion Disk. Influence of the Geometry upon its Shape Parameters

Gerbai, D., Pelat, D. **95**, 18

Accretion of the Cloud of Gas Debris of Stars Disrupted by the Tidal Forces of a Supermassive Black Hole

Gurzadyan, V.G., Ozernoy, L.M. **95**, 39

Supermassive Black Holes and Emission Lines of Active Galaxies and QSOs: Accretion Rate, Black Hole Mass, and Photoionization Models

Aldrovandi, S.M.V. **97**, 122

A Possible Capture Process for the Solar Central Black Hole

Picchio, G. **99**, 31

Supercritical, Steady-state, Spherically Symmetric Accretion into a Black Hole

Freihoffer, D. **100**, 178

On Some Possible Relativistic Effects in SS 433

Ruffini, R., Doo Jong Song, Stella, L. **103**, L7

Galaxy Mergers and Active Galactic Nuclei

Roos, N. **104**, 218

Spherical Accretion with e^+e^- -Pair Production

Brinkmann, W.P. **107**, 48

High Energy γ -rays from a Relativistic Plasma

Giovannelli, F., Karakula, S., Tkaczyk, W. **107**, 376

Optical Structure of the Core of the Dynamically Advanced Globular Cluster NGC 6397

Aurière, M. **109**, 301

On the Time Scales of the Pair Production Processes in Astrophysics

Zdziarski, A.A. **110**, L7

The Distribution of Stars Around a Black Hole: Numerical Solution of the Kinetic Equation with Collisions

Bisnovatyi-Kogan, G.S., Churayev, R.S., Kolosov, B.I. **113**, 179

Do Black Holes Exist at the Centres of Globular Clusters?

Gurzadyan, V.G. **114**, 71

Stationary Spherical Accretion into Black Holes. The Transition from the Optically Thin to the Optically Thick Regime

Soffel, M.H. **116**, 111

Tidal compression of a star by a large black hole. I. Mechanical evolution and nuclear energy release by proton capture

Carter, B., Luminet, J.-P. **121**, 97

Interaction of a rotating charged black-hole with a uniform magnetic field

Denardo, G., Treves, A., Vergani, F. **123**, 355

Super-Eddington luminosity characteristics of active galactic nuclei

Bassani, L., Dean, A.J., Sembay, S. **125**, 52

Neutrino emission from black holes

Giovannelli, F., Karakula, S., Tkaczyk, W. **125**, 126

Black hole electromagnetic fields and negative energy states for charged particles

Prasanna, A.R. **126**, 111

Blue Stars

A Search for Faint Blue Stars in High Galactic Latitudes. II. Fourteen PSS Fields at Declinations $+6^\circ$ and 0° near the South Galactic Pole

Berger, J., Fringant, A.-M. **81**, 388; **39**, 39

Five-colour Photometry of Blue Stars in the Magellanic-cloud Region

Wamsteker, W. **95**, 210; **43**, 127

Blue Stragglers

Photometric Search for Ap Stars among Blue Stragglers in Open Clusters

Maitzen, H.M., Seggewiss, W., Tüg, H. **96**, 174

Stellar Content of Young Open Clusters. I. Blue Stragglers

Mermilliod, J.-C. **109**, 37

Bolometric Correction

Theoretical $B-V$ Color Indices and Bolometric Corrections for Hot Horizontal Branch Stars

Rossi, L. **74**, 195

The Colours of G and K Type Giant Stars. I

Gustafsson, B., Bell, R.A. **74**, 313

Bolometric Corrections of Silicon Stars

North, P. **97**, 359

Empirical Bolometric Corrections for the Main-Sequence

Habets, G.M.H.J., Heintze, J.R.W. **104**, 170; **46**, 193

Bremsstrahlung, see Plasma physics

Bright Stars

uvby β Photometry of Equatorial and Southern Bright Stars II

Heck, A., Manfroid, J. **92**, 324; **42**, 311

Bursts

Observation of Small Size Solar Radio Bursts at Metric Wavelengths

Kerdraon, A. **71**, 266

Type IV Radio Emission and Multi-stage Solar Particle Acceleration

Schindler, S.M. **73**, 240

Stochastic Diffusion of Photons in an Unstable Turbulent and Magnetized Plasma

Mangeney, A., Veltri, P. **73**, 292

Evidence for Periodicity in a Gamma Ray Burst

Barat, C., Chambon, G., Hurley, K., Niel, M., Vedrenne, G., Estulin, I.V., Kurt, V.G., Zenchenko, V.M. **79**, L24

Gyro-synchrotron Modulation in the Moving Type IV Bursts

Trottet, G., Pick, M., Heyvaerts, J. **79**, 164

The Evolution of Polarization in Type U Solar Radio Bursts

Benz, A.O., Urbarz, H.W., Zlobec, P. **79**, 216

On the Fundamental Emission of Type III Solar Radio Bursts

Wentzel, D.G. **80**, 268

A Class of Quasiperiodic Microwave Bursts as Evidence for Adiabatic Heating

Wiehl, H.J., Mätzler, C. **82**, 93

Type III-like Solar Radio Bursts

Elgaroy, O. **82**, 308

6 cm Observations of a Solar Active Region and Bursts with $\sim 6''$ Resolution

Erskine, F.T., Kundu, M.R., Rao, A.P. **83**, 256

The Jovian S-bursts. I. Occurrence with L-bursts and Frequency Limit

Leblanc, Y., Genova, F., de la Noë, J. **86**, 342

The Jovian S-bursts. II. Frequency Drift Measurements of Different Frequencies Throughout Several Storms

Leblanc, Y., Aubier, M.G., Rosolen, C., Genova, F., de la Noë, J. **86**, 349

Evidence for Quasi-quantization of Solar Flare mm-Wave Radiation

Kaufmann, P., Strauss, F.M., Opher, R., Laporte, C. **87**, 58

Space-time Evolution of Type III Burst Sources Observed with the Nançay Radioheliograph-implications for the Size of the Emitting Source

Raoult, A., Pick, M. **87**, 63

The Position and Polarization of Type III Solar Bursts

Dulk, G.A., Suzuki, S. **88**, 203

The Position and Polarization of Type V Solar Bursts

Dulk, G.A., Suzuki, S., Gary, D.E. **88**, 218

Strong Langmuir Wave Turbulence: Some Results with Selfconsistent Landau Damping

van Grunsven, T.F.J., Hoyng, P., Nicholson, D.R. **91**, 7

Impulsive Electron Acceleration to Energies of Tens of kT_e by Langmuir Wave Turbulence

Hoyng, P., Duijeman, A., van Grunsven, T.F.J., Nicholson, D.R. **91**, 17

A Catalogue of Fine Structures in Type IV Solar Radio Bursts

Bernold, T. **91**, 262; **42**, 43

Polarized Solar Type III Bursts between 2.3 and 4.9 MHz

Hanasz, J., Schreiber, R., Aksenov, V.I. **91**, 311

Microwave Time Delays as Evidence for a Collisionless Conduction Front

Wiehl, H.J., Schöchl, W.A., Magun, A. **92**, 260

Periodic Fluctuations in the Solar Millimeter Wave Burst Associated with the Solar Flare on September 22, 1978

Urpo, S., Tiuri, M., Tlamicha, A., Pračka, M., Karlický, M. **93**, 121

Quasi-periodic Short-term Modulations During a Moving Type IV Burst

Trottet, G., Kerdraon, A., Benz, A.O., Treumann, R. **93**, 129

Coronal Evolution and Solar Type I Radio Bursts: An Ion-acoustic Wave Model

Benz, A.O., Wentzel, D.G. **94**, 100

On the Heliocentric Distance Dependence of Plasmon Emission in Type III Bursts

de Genouillac, G.V., Escande, D.F. **94**, 219

Dynamic Spectra of Some Terrestrial Ionospheric Effects at Decametric Wavelengths. Applications in Other Astrophysical Contexts

Meyer-Vernet, N., Daigne, G., Lecacheux, A. **96**, 296

Radiation Mode and Coronal Propagation of Solar Type III Radio Bursts Observed on 14 November 1971 During Stereo-I Experiment

Poquérousse, M., Bougeret, J.L. **97**, 36

Possible Slowdown of the Plasma Wave Sources Associated with Type III Radio Bursts

de Genouillac, G.V., Escande, D.F. **99**, L18

A Deep Optical Search of the 1979 April 6 Gamma-ray Burst Error Box

Klebesadel, R.W., Estulin, I.V., Zenchenko, V.M. **100**, L1

Solar Type I Radio Bursts: Shock Model

Wentzel, D.G. **100**, 20

Collisionless Perpendicular Shocks: Applications to Solar Type II Radio Bursts and the Antares (α Sco) B Radio Emission

Klinkhamer, F.R., Kuijpers, J. **100**, 291

Relationship Between a Soft X-ray Long Duration Event and an Intense Metric Noise Storm

Lantos, P., Kerdraon, A., Rapley, G.G., Bentley, R.D. **101**, 33

On the Maximum Luminosity in X-ray Bursts

van Paradijs, J. **101**, 174

The Polarization of Second Harmonic Radio Emission in Type III Bursts

Zlotnik, E. Ya. **101**, 250

Erratum: Possible Slowdown of the Plasma Wave Sources Associated with Type III Radio Bursts

de Genouillac, G.V., Escande, D.F. **101**, 276

Correlation between Bandwidth and Frequency Drift Velocity of Intermediate Drift Bursts

Elgaroy, Ø., Soldal, O. **104**, 99

Solar Type I Noise Storms and Newly Emerging Magnetic Flux

Spicer, D.S., Benz, A.O., Huba, J.D. **105**, 221

Infrared Scans of Gamma Ray Burst Source Regions

Apparao, K.M.V., Allen, D.A. **107**, L5

Some Remarks on the Spectra of X-ray Bursts

van Paradijs, J. **107**, 51

Search for Harmonic Emission in Solar Type I Radio Bursts

Jaeggi, M., Benz, A.O. **107**, 88

Evidence of Primary and Secondary Bursts in Solar Type III Emission

Benz, A.O., Treumann, R., Vilmer, N., Mangeney, A., Pick, M., Raoult, A. **108**, 161

Radio Imaging of Solar Flares Using the Very Large Array: New Insights into Flare Process

Kundu, M.R., Schmahl, E.J., Velusamy, T., Vlahos, L. **108**, 188

The Log N-log S Curve of Gamma-ray Bursts Detected by the SIGNE Experiments

Barat, C., Chambon, G., Hurley, K., Niel, M., Vedrenne, G. **109**, L9

Fine Structure near the Starting Frequency of Solar Type III Radio Bursts

Benz, A.O., Zlobec, P., Jaeggi, M. **109**, 305

"Least Square Fitting" and "CLEAN": a Combination for Analysis of One-dimensional Synthesis

Palagi, F. **111**, 211; **49**, 101

Hydrogen-Helium Flashes on Accreting Neutron Stars as a Possible Origin of Gamma-ray Bursts

Hameury, J.M., Bonazzola, S., Heyvaerts, J., Ventura, J. **111**, 242

An Association Between Coronal Structures and Type III Burst Sources

Trottet, G., Pick, M., House, L., Illing, R., Sawyer, C., Wagner, W. **111**, 306

The Importance of Plasma Effects on Electron-cyclotron Maser-emission from Flaring Loops

Sharma, R.R., Vlahos, L., Papadopoulos, K. **112**, 377

Visible Light Observations of a Dense Plasmoid Associated with a Moving Type IV Solar Radio Burst

Stewart, R.T., Dulk, G.A., Sheridan, K.V., House, L.L., Wagner, W.J., Sawyer, C., Illing, R., Wagner, W. **116**, 217

Supplementary information for some γ -ray bursts by SAS-2 antineutrino dome data

Özel, M.E., Kiziloğlu, Ü., Tokdemir, F. **118**, 114

Mm- to cm-wavelength time delays in solar burst emission and the effect of varying magnetic field

Costa, J.E.R., Kaufmann, P. **119**, 131

Statistical description of a simulacrum for eruptive variables

Whitney, C.A. **119**, 315

Dissipative thermal models for solar microwave burst delays

Brown, J.C., MacKinnon, A.L., Zodi, A.M., Kaufmann, P. **123**, 10

Solar-type U bursts and coronal transients

Leblanc, Y., Poquérusse, M., Aubier, M.G. **123**, 307

Fine time structure in the 1979 March 5 gamma ray burst

Barat, C., Hayles, R.I., Hurley, K., Niel, M., Vedrenne, G., Desai, U., Estulin, I.V., Kurt, V.G., Zenchenko, V.M. **126**, 400

Corquake and shock heating model of the 5 March 1979 gamma ray burst

Ellison, D.C., Kazanas, D. **128**, 102

BY Draconis Stars

On the Initial Distribution and Evolution of Angular Momentum for Main Sequence Stars

Carrasco, L., Franco, J., Roth, M. **86**, 217

Effect of Spots on a Star's Radius and Luminosity

Spruit, H.C. **108**, 348

The Flow of Heat near a Starspot

Spruit, H.C. **108**, 356

Rotation and tidal interactions in BY Draconis binaries

Edwards, D.A. **123**, 316

C II Regions

The Structure of W 51

Pankonin, V., Payne, H.E., Terzian, Y. **75**, 365

Studies of Ionized Carbon Regions in Dark Clouds

van Gorkom, J.H., Shaver, P.A., Goss, W.M. **76**, 1

Ca II Emission, see Emission Lines, Emission Line Stars, Solar Prominences, Spectrum Variables, Stellar Chromospheres, Wilson-Bappu-Effect

Magnetic Structure in Cool Stars. VI. Ca II H and K Fluxes from Evolved Stars

Middelkoop, F. **113**, 1

Ca II chromospheric emission and rotation of main sequence stars

Catalano, S., Marilli, E. **121**, 190

Ca II K emission diagnostics. I. The widths and the strengths in a one-dimensional model

Marmolino, C., Severino, G. **127**, 33

Carbon Stars

Observation of Continuum Emission between 1 and 4 mm from the Carbon Star V Cygni

Querci, M., Courtin, R., Querci, F., Coron, N., Gispert, R. **77**, 155

Discoveries on Southern, Red-sensitive Objective-prism Plates. II. New S/MS, Carbon and SC Stars

Mac Connell, D.J. **80**, 329; **38**, 329

New Carbon Stars in Cygnus

Kurtanidze, O.M., West, R.M. **81**, 388; **39**, 35

IJHKL Photometry of Carbon Stars

Bergeat, J., Lunel, M. **87**, 139

Advanced Evolutionary Stages of Intermediate-mass Stars. I. Evolution of Surface Compositions

Renzini, A., Voli, M. **94**, 175

Detection of the $J = 1 \rightarrow 0$ and $J = 2 \rightarrow 1$ Rotational Lines of SiS in the Molecular Envelope of IRC + 10216

Grasshoff, M., Tiemann, E., Henkel, C. **101**, 238

A Search for C₂ Features in the Hydrogen-poor Carbon Star HD 182040

Wallerstein, G. **105**, 219

A Carbon Star in the Globular Cluster Lindsay 102

Danks, A.C. **106**, 4

Molecular Abundances in IRC + 10216

Lafont, S., Lucas, R., Omont, A. **106**, 201

High Sensitivity Molecular Line Observations of IRC + 10216

Olofsson, H., Johansson, L.E.B., Hjalmarson, Å., Nguyen-Quang-Rieu **107**, 128

On the Structure of the Outer Layers of Cool Carbon Stars

Querci, F., Querci, M., Wing, R.F., Cassatella, A., Heck, A. **111**, 120

The pulsation of carbon Miras

Bergeat, J., Sibai, A.M. **119**, 207

Cataclysmic Variables, see also Dwarf Novae

The Outbursts of the Dwarf Nova VW Hydr: A Comparative Study of Short and Long Eruptions

Haefner, R., Schoembs, R., Vogt, N. **77**, 7

The Unimportance of Line Blocking in the Spectra of Accretion Disks

Wesemael, F. **77**, 354

Formation of Cataclysmic Binaries through Common Envelope Evolution

Meyer, F., Meyer-Hofmeister, E. **78**, 167

Periodic and Secular Variations in the Lightcurve of Dwarf Nova EX Hydrae

Vogt, N., Krzeminski, W., Sterken, C. **85**, 106

Z Cha - New Evidence for Gravitational Waves?

Ritter, H. **86**, 204

- The SU UMa Stars, an Important Sub-group of Dwarf Novae
Vogt, N. **88**, 66
- A Study of the Cataclysmic Variable TX CVn
Fried, J.W. **88**, 141
- On the Size of Accretion Disks in Cataclysmic Binaries
Ritter, H. **91**, 161
- A Photometric Study of 2 A 0526-328
Motch, Ch. **100**, 277
- The Ultraviolet Spectrum of the X-ray Source 2A0526-33
Mouchet, M., Bonnet-Bidaud, J.M., Ilavsky, S.A., Chevalier, C. **102**, 31
- IUE Spectroscopy of Cataclysmic Variables
Krautter, J., Klare, G., Wolf, B., Duerbeck, H.W., Rahe, J., Vogt, N., Wargau, W. **102**, 337
- On the Elusive Cause of Cataclysmic Variable Outbursts
Meyer, F., Meyer-Hofmeister, E. **104**, L10
- Vertical Structure of Accretion Disks
Meyer, F., Meyer-Hofmeister, E. **106**, 34
- A Photometric and Polarimetric Investigation of the Old Nova RR Pictoris
Haefner, R., Metz, K. **109**, 171
- New Evidence of Strong UV Radiation in TT Ari
Wargau, W., Drechsel, H., Rahe, J., Vogt, N. **110**, 281
- On the Origin of Low Mass Cataclysmic Binaries
Livio, M. **112**, 190
- First Ultraviolet Observations of Two New Cataclysmic Variables
1 E0643-1648 and 4 U1849-31
Bonnet-Bidaud, J.M., Mouchet, M., Motch, C. **112**, 355
- IUE Observations of Dwarf Novae During Active Phases
Klare, G., Krautter, J., Wolf, B., Stahl, O., Vogt, N., Wargau, W., Rahe, J. **113**, 76
- Evolution of Low Mass Stars Through Mass Loss: Transition from the Main Sequence to the Degenerate Phase
D'Antona, F., Mazzitelli, I. **113**, 303
- PS 74: The Discovery of a New SU UMa Type Dwarf Nova with High Orbital Inclination
Barwig, H., Hunger, K., Kudritzki, R.P., Vogt, N. **114**, L11
- Constraints on the system parameters of the dwarf nova AH Herculis
Wargau, W., Rahe, J., Vogt, N. **117**, 283
- VW Hydri revisited: conclusions on dwarf nova outburst models
Vogt, N. **118**, 95
- EX Hydrae: a coordinated campaign of photoelectric photometry from four observatories
Sterken, C., Vogt, N., Freeth, R., Kennedy, H.D., Marino, B.F., Page, A.A., Walker, W.S.G. **118**, 325
- Statistical description of a simulacrum for eruptive variables
Whitney, C.A. **119**, 315
- A model for the standstill of the Z Camelopardalis variables
Meyer, F., Meyer-Hofmeister, E. **121**, 29
- The formation of massive white dwarfs in cataclysmic binaries
Law, W.Y., Ritter, H. **123**, 33
- Photoelectric UVB photometry of southern and equatorial dwarf novae
Vogt, N. **124**, 151; **53**, 21
- Stellar activity and the period gap in cataclysmic variables
Spruit, H.C., Ritter, H. **124**, 267
- BD Pavonis: a unique cataclysmic variable
Barwig, H., Schoembs, R. **124**, 287
- Spectroscopic observations of the cataclysmic variable HL CMA during outburst
Wargau, W., Bruch, A., Drechsel, H., Rahe, J. **125**, L1
- Star-planet systems as progenitors of cataclysmic binaries: tidal effects
Livio, M., Soker, N. **125**, L12
- Superoutbursts: a general phenomenon in dwarf novae
van Paradijs, J. **125**, L16
- The disk-star boundary layer and its effect on the accretion disk structure
Regev, O. **126**, 146
- Magnetic braking and tidal energy dissipation in close binaries
Verbunt, F., Hut, P. **127**, 161
- The eclipsing dwarf nova OY Carinae. I. Relative luminosities in quiescence and during a short eruption
Vogt, N. **128**, 29
- Accretion disks in cataclysmic variables. The influence of the frictional parameter α on the structure
Meyer, F., Meyer-Hofmeister, E. **128**, 420
- ### Catalogues
- A Computer Readable Catalogue
Gaida, G., Krautter, J., Zekl, H. **76**, 258; **37**, 465
- A Catalogue of Radial Velocities in the Large Magellanic Cloud
Feitzinger, J.V., Weiss, G. **76**, 370; **37**, 575
- Erratum: General Catalogue of FK 4 Stars Observed with Astrolabes (1958-1975)
Billard, G., Guallino, G., Vigouroux, G. **77**, 369
- Discoveries on Southern, Red-sensitive Objective-prism Plates. II. New S/MS, Carbon and SC Stars
Mac Connell, D.J. **80**, 329; **38**, 329
- A Catalogue of Low Mass Clouds in the Solar Vicinity, Results from a Photometric Survey of 84 Volumes
Knude, J. **80**, 331; **38**, 407
- Second Catalogue of Am Stars with Known Spectral Types
Curchod, A., Hauck, B. **80**, 331; **38**, 449
- Photoelectric Catalogue (Magnetic Tape)
Python, M. **80**, 331; **38**, 463
- A Catalogue of Emission Regions in M 33
Sabbadin, F., Rafanelli, P., Bianchini, A. **81**, 389; **39**, 97
- A Catalogue of Linear Polarization of Radio Sources
Tabara, H., Inoue, M. **83**, 384; **39**, 379
- A Determination and Possible Explanation of a General Magnitude Equation Between the FK 4 and Southern Catalogues of Observation
Schwan, H. **84**, 251
- uvby β Photoelectric Photometric Catalogue
Hauck, B., Mermilliod, M. **84**, 268; **40**, 1
- A Catalogue of Supernova Remnant Candidates in Nearby Galaxies
D'Odorico, S., Dopita, M.A., Benvenuti, P. **84**, 269; **40**, 67
- Statistical Properties of Radio Sources of Intermediate Strength
Katgert-Merkelijn, J., Lari, C., Padrielli, L. **84**, 269; **40**, 91
- An Analysis of the Hauck-Mermilliod Catalogue of Homogeneous Four-color Data, II.
Davis Philip, A.G., Egret, D. **85**, 266; **40**, 199
- A Catalogue of Stellar Spectrophotometric Data
Ardeberg, A., Virdefors, B. **86**, 268; **40**, 307
- Catalogue of Photometric Data Related to Surface Magnetic Fields for B-type Stars
Cramer, N., Maeder, A. **87**, 254; **41**, 111
- Neutral Hydrogen 21 cm Galactic Spectra Observed at Arecibo Towards 45 Extragalactic Radio Sources
Crovisier, J., Kazès, I., Aubry, D. **88**, 283; **41**, 229

- On the Derivation of a Catalogue of Radio Source Positions from Interferometric Observations
Walter, H.G. **89**, 198
- Radio Observations of a Complete Sample of Spiral Galaxies at 408 MHz
Gioia, I.M., Gregorini, L. **89**, 252; **41**, 329
- Vilnius Photometric Catalogue (Magnetic Tape)
North, P. **89**, 252; **41**, 395
- A Catalogue of [Fe/H] Determinations
Cayrel de Strobel, G., Bentolila, C., Hauck, B., Curchod, A. **89**, 253; **41**, 405
- Catalogue général d'étoiles de type O, données spectroscopiques et photométriques, bande magnétique et listage
Goy, G. **91**, 263; **42**, 91
- Linear Polarization Observations of Extragalactic Radio Sources at $\lambda\lambda$ 2 cm and at 17-19 cm
Simard-Normandin, M., Kronberg, P.P., Neidhöfer, J. **95**, 208; **43**, 19
- A Study of the 4C Catalogue of Radiosources Between Declinations 20° and 40° III - 2700 and 5000 MHz Flux Density Measurements
Véron, M.P., Véron, P., Pauliny-Toth, I.I.K., Witzel, A. **95**, 393; **43**, 195
- A Catalogue of Low-resolution Wolf-Rayet Spectra
Sivertsen, S. **95**, 394; **43**, 221
- Microfiche Edition of CSI
Ochsenbein, F., Bischoff, M., Egret, D. **95**, 395; **43**, 259
- Catalog and Bibliographical Index of Planetary Nebulae (Magnetic Tape and Microfiche)
Acker, A., Marcout, J., Ochsenbein, F. **95**, 395; **43**, 265
- Standard Sources at 10.6 GHz and Variability in 3C 147
Andrew, B.H., MacLeod, J.M., Feldman, P.A. **99**, 36
- Preliminary Comments on the Catalogue of Apparent Diameters and Absolute Radii of Stars (Cadars)
Fracassini, M., Manzolini, F., Pasinetti, L.E. **99**, 203; **44**, 55
- A Catalogue and Bibliography of Mn-Hg Stars
Schneider, H. **99**, 205; **44**, 137
- A Catalogue of Variable-visual Binary Stars
Proust, D., Ochsenbein, F., Pettersen, B.R. **99**, 401; **44**, 179
- Catalogue of Eclipses of Jupiter's Galilean Satellites, 1610-2000
Lieske, J.H. **99**, 402; **44**, 209
- Structure and Position Measurements at 5 GHz of Radiogalaxies Selected from the B2 Catalog
Grueff, G., Kotanyi, C., Schiavo-Campo, P., Tanzella-Nitti, G., Vigotti, M. **99**, 403; **44**, 241
- Two Differing Definitions of the Dynamical Equinox and the Mean Obliquity
Standish, E.M., Jr. **101**, L17
- A Catalogue of [Fe/H] Determinations
Cayrel de Strobel, G., Bentolila, C., Hauck, B., Lovy, D. **101**, 419; **45**, 97
- A Catalogue of Observations in Hz
Ducati, J.R. **101**, 420; **45**, 119
- Untrivial Redshifts: A Bibliographical Catalogue
Reboul, H.J. **101**, 420; **45**, 129
- Catalogue of Apparent Diameters and Absolute Radii of Stars (CADARS)
Fracassini, M., Pasinetti, L.E., Manzolini, F. **101**, 420; **45**, 145
- Third Catalogue of Stars Measured in the Geneva Observatory Photometric System
Rufener, F. **102**, 280; **45**, 207
- A Catalogue of Extragalactic Radio Sources having Flux Densities Greater than 1 Jy at 5 GHz
Kühr, H., Witzel, A., Pauliny-Toth, I.I.K., Nauber, U. **102**, 280; **45**, 367
- Up-To-Date UBVR I Values for the E-Region Standard Stars
Vogt, N., Geisse, H.S., Rojas, S. **103**, 207; **46**, 7
- Grand Nuage de Magellan. Troisième Liste D'Etoiles Membres du Grand Nuage de Magellan et Liste D'Etoiles Galactiques
Fehrenbach, Ch., Dufлот, M., Dufлот, A., Genty, V., Mannone, C. **103**, 207; **49**, 13
- The Colours, Magnitudes and Parallaxes of the Nearby Stars
Grenon, M., Rufener, F. **103**, 208; **46**, 25
- A Photometric Catalogue of Stars in the Direction of the Bright Cloud Bin Sagittarius
Terzan, A., Bernard, A. **103**, 208, **46**, 49
- Spectroscopic and Photometric Observations of Galaxies from the ESO/Uppsala List. Third Catalogue
West, R.M., Surdej, J., Schuster, H.-E., Muller, A.B., Laustsen, S., Borchkhadze, T.M. **103**, 208; **46**, 57
- A Catalogue of Jupiter's Decametric Emission Observed by Voyager-1 and by Voyager-2 in the Range 15-40 MHz
Barrow, C.H. **103**, 209; **46**, 111
- Compact and Extended Structure in B2 Radio Sources of Intermediate Strength
Padrielli, L., Kapahi, V.K., Katgert-Merkelijn, J.K. **106**, 181; **46**, 473
- H I Line Studies of Galaxies: I-General Catalogue of 21-cm Line Data
Bottinelli, L., Gouguenheim, L., Paturel, G. **106**, 182; **47**, 171
- Picture Gallery: a Structured Presentation of OAO-2 Photometric Data Supported by OAO-2 Spectrophotometric Data and UBV, ANS and TDI Observations
Koornneef, J., Meade, M.R., Wesselius, P.R., Code, A.D., van Duinen, R.J. **106**, 381; **47**, 341
- Catalogue of Measurements in the DDO Photoelectric Photometric System (Magnetic Tape)
Meylan, G. **107**, 414; **47**, 483
- A Complete Sample of Virgo Cluster Galaxies
Kraan-Korteweg, R.C. **107**, 414; **47**, 505
- A List of Stars with Large Expected Angular Diameters
Ochsenbein, F., Halbwachs, J.L. **107**, 414; **47**, 523
- A Table of Redshifts for Abell Clusters
Sarazin, C.L., Rood, H.J., Struble, M.F. **108**, L7
- Study of H₂ Profile in 72 Be Stars
Andrillat, Y., Fehrenbach, Ch. **108**, 416; **48**, 93
- Radial Velocities from Objective-prism Plates in the Direction of the Large Magellanic Cloud (Text in French)
Fehrenbach, Ch., Dufлот, M. **110**, 182; **48**, 409
- Geneva Photometric Boxes. O. Announcement of the Catalogue (Microfiches and Magnetic Tape)
Nicolet, B. **110**, 183; **48**, 485
- List of 333 Variable, Microvariable or Suspected Variable Stars Detected in the Geneva Photometry
Rufener, F., Bartholdi, P. **110**, 184; **48**, 503
- On the Combination of Partially Overlapping Sets of Data
Reed, B.C., FitzGerald, M.P. **111**, 81
- Meridian Observations Made in Brorfelde (Copenhagen University Observatory) 1969-1975. Positions of 6427 Stars Brighter than 11.00 vis.mag.
Helmer, L., Fogh Olsen, H.J. **111**, 209; **49**, 13

- High Angular Resolution uvby β Observations of Stars Earlier than GO in the Intermediate and Low Latitude Areas SA 128 and SA 156
Knude, J. **111**, 210; **49**, 69
- Homogenous Catalogue of Red and Infrared Magnitudes in the Photoelectric Photometric System of Kron (Magnetic Tape)
Jasniewicz, G. **111**, 211; **49**, 99
- Intermediate Band Filter Spectrophotometry of Bright Galaxies. I. Observations
Solheim, J.E., de Vaucouleurs, G., de Vaucouleurs, A. **111**, 212; **49**, 109
- ANS Ultraviolet Photometry, Catalogue of Point Sources
Wesselius, P.R., Van Duinen, R.J., de Jonge, A.R.W., Aalders, J.W.G., Luinge, W., Wildeman, K.J. **112**, 178; **49**, 427
- Detailed Bibliography on the Surface Photometry of Galaxies
Davoust, E., Pence, W.D. **112**, 394; **49**, 631
- Catalogue of Minor Planet Identities. I. Identities with Planets (1)-(2297)
Schmadel, L.D. **112**, 395; **49**, 691
- Conversion of Positions and Proper Motions from B 1950.0 to the IAU System at J 2000.0
Standish, E.M., Jr. **115**, 20
- A Pool of Faint Stars Applied to Star Catalogue Formation
Hering, R., Walter, H.G. **115**, 197
- The Fourth Meridian Catalogue of Besançon Observatory (Text in French)
Crézé, M., Mazodier, B., Clairemidi, J., Colin, J., Considère, S., Hilaire, G., Oblak, E., Parisot, J.P., Puel, F., Andrez, R. **115**, 216; **50**, 147
- Equivalent Widths of Spectral Lines in B-type Stars (Text in French)
Didelon, P. **115**, 217; **50**, 199
- Radio Observations at 14.7 GHz of Southern Planetary Nebulae
Milne, D.K., Aller, L.H. **115**, 217; **50**, 209
- UBV-H β Photometry of Luminous Stars Between $l=335^\circ$ and $l=6^\circ$
Dachs, J., Kaiser, D., Nikolov, A., Sherwood, W.A. **115**, 218; **50**, 261
- Catalogue of the Small Magellanic Cloud star members
Azzopardi, M., Vigneau, J. **117**, 171; **50**, 291
- Status of evolution of F, G, and K field stars contained in the [Fe/H] catalogue
Cayrel de Strobel, G., Bontolila, C. **119**, 1
- Lists of photometric Am candidates
Nicolet, B. **119**, 164; **51**, 245
- The magnitude equation in right ascension between the FK 4 and recent catalogues of southern observations
Bien, R., Schwan, H. **119**, 307
- Effective H I diameters of galaxies
Fouqué, P. **122**, 273
- First astrolabe catalogue of Rio de Janeiro
Andrei, A.H., D'Avila, V.A., Nascimento, J.O., Penna, J.L., Queiroz, M. **123**, 358; **52**, 373
- The first astrolabe catalogue at Valinhos
Clauzet, L.B.F. **123**, 359; **52**, 403
- Investigation of the systematic errors of the Belgrade NPZT and AGK 3 catalogues
Sadžakov, S., Dačić, M., Fomin, V.A. **123**, 360; **52**, 455
- Catalog of magnetic field measurements
Didelon, P. **124**, 154; **53**, 119
- A catalogue of late-type supergiant stars in the Small Magellanic Cloud
Prévot, L., Martin, N., Maurice, E., Rebeiro, E., Rousseau, J. **125**, 176; **53**, 255
- Second catalogue of H α line profiles in 55 Be star spectra
Andrillat, Y. **126**, 220; **53**, 319
- Standard photometric diameters of galaxies
Fouqué, P., Patrel, G. **126**, 221; **53**, 351
- Galaxies rotation curves: a catalogue
Baiesi-Pillastrini, G.C., Palumbo, G.G.C., Vettolani, G. **126**, 221; **53**, 373
- Catalogue of non-stellar molecular maser sources and their probable infrared counterparts in the galactic plane
Braz, M.A., Epchtein, N. **127**, 425; **54**, 167
- Celestial Mechanics**, see also N-Body Problem, Precession, Three Body Problem, Time Observations
- New Numerical Experiments to Deplete the Outer Part of the Asteroidal Belt
Froeschlé, C., Scholl, H. **72**, 246
- Scale Invariance, Metrical Connection, and the Motions of Astronomical Bodies
Maeder, A., Bouvier, P. **73**, 82
- The Obliquity of the Ecliptic
Wittmann, A. **73**, 129
- A Statistical Method for the Determination of Orbits of Asteroids and Satellites
Dvorak, R., Edelman, C. **77**, 320
- Asymptotic Orbits and Instability Zones in Dynamical Systems
Magnenat, P. **77**, 332
- Trapped Orbits in a Time-dependent Potential
Antonopoulos, P., Barbani, B. **78**, 195
- Determination of the Dynamical Parameters of the Galilean Satellites' Orbits
Thuillot, W. **79**, 84
- Representations of Perturbations Brought by Pluto on the Large Planets
Piroux, J. **79**, 132
- Dynamical Coupling of Periodic Systems (II): A Particular Case of Homographic Solution
Stellmacher, I. **80**, 301
- Fast Evaluation of Fourier Series
Coffey, S., Deprit, A. **81**, 310
- Motion of the Two Rigid Bodies Under the Gravitational Influence of Each Other
Bhatnagar, K.B., Gupta, U. **82**, 163
- New Monte Carlo Simulations of the Orbital Evolution of Short-period Comets and Comparison with Observations
Froeschlé, C., Rickman, H. **82**, 183
- The Motion of Mars: 1751-1969
Laubscher, R.E. **82**, 392
- The ELP Solution of the Main Problem of the Moon
Chapront-Touzé, M. **83**, 86
- Libration of Comet P/Boethin around the 1/1 Resonance with Jupiter
Benest, D., Bien, R., Rickman, H. **84**, L11
- Second Order Theory of the Inner Planets
Bretagnon, P. **84**, 329
- On Exact Solutions of Diffusion Equation in Cometary Dynamics
Yabushita, S. **85**, 77
- The Main Problem of the Motion of the Moon: Comparison Between Two Theories
Chapront-Touzé, M., Henrard, J. **86**, 221

- Beobachtung und Bahnverbesserung des kleinen Planeten (115) Thyra
Landgraf, W. **87**, 252; **41**, 17
- Periodic Orbits and Ergodic Components of a Resonant Dynamical System
Contopoulos, G., Zikides, M. **90**, 198
- The Existence and Stability of the Libration Points of an Axisymmetric Body Moving around Another Axisymmetric Body
Bhatnagar, K.B., Gupta, U. **91**, 194
- Planetary Perturbations of the Moon. Comparison of ELP-1900 with Brown's Theory
Chapront-Touzé, M., Chapront, J. **91**, 233
- Elliptic Hill's Problem: The Continuation of Periodic Orbits
Ichtiaroglou, S. **92**, 139
- Stability of Tidal Equilibrium
Hut, P. **92**, 167
- The Stochasticity of Peculiar Orbits in the 2/1 Kirkwood Gap
Froeschlé, C., Scholl, H. **93**, 62
- Periodic Planetary-type Orbits of the General 4-Body Problem with an Application to the Satellites of Jupiter
Hadjidemetriou, J.D., Michalodimitrakis, M. **93**, 204
- Great Inequalities and Libration Terms of Satellites I, II, and III of Jupiter
Vu, D.T. **94**, 140
- Temporary Satellite Captures of Comets by Jupiter
Carusi, A., Valsecchi, G.B. **94**, 226
- Asymptotic Solutions for a Variable Mass Two-body Problem
Munier, A., Burgan, J.R., Feix, M., Fijalkow, E. **94**, 373
- Galactical Tidal Limits on Star Clusters. I. Stability of Stellar Orbits and the Zero Velocity Surfaces
Keenan, D.W. **95**, 334
- Galactic Tidal Limits on Star Clusters. II. Tidal Radius and Outer Dynamical Structure
Keenan, D.W. **95**, 340
- New and Evolved Comets in the Solar System
Fernández, J.A. **96**, 26
- Perturbation of Parabolic Comets by a Transient Solar Companion
Wilkins, D. **98**, 30
- New Determination of the Orbit of Miranda
Veillet, Chr. **98**, 218
- Time-varying Newtonian Gravity. An Upper Limit for the Rate of Change of the Gravitational Constant
Lapedra, R., Palacios, J.A. **98**, 382
- Elliptic Hill Problem: Families of Periodic Orbits
Ichtiaroglou, S. **98**, 401
- Perturbations by Jupiter of a Chain of Objects Moving in the Orbit of Comet Oterma
Carusi, A., Kresák, L., Valsecchi, G.B. **99**, 262
- Relativistic Perturbations of Planetary Orbits in the Generalized Three-parametric Schwarzschild Metric. The Case of Mercury
Lestrade, J.-F. **100**, 143
- The Motion of the Earth-Moon System Between 1700 and 2100 in Newcomb's Theory and in JPL-Ephemerides
Stumpff, P. **101**, 52
- Explosive Mass Loss in Binary Stars: the Two Time-scale Method
Hut, P., Verhulst, F. **101**, 134
- Construction of a Theory of the Outer Planets Through an Iterative Method
Bretagnon, P. **101**, 342
- A Simple Method of Orbit Determination
Neutsch, W. **102**, 59
- Variations of the Orbit of Comet P/Gehrels 3: Temporary Satellite Captures by Jupiter
Rickman, H., Malmort, A.M. **102**, 165
- Note on the Numerical Expressions for Precession Quantities
Bretagnon, P., Chapront, J. **103**, 103
- Third Order Theory of the Four Large Planets
Simon, J.L., Francou, G. **103**, 223
- Comparison of ELP-2000 to a JPL Numerical Integration
Chapront, J., Chapront-Touzé, M. **103**, 295
- Numerical Integration of the Satellites of the Outer Planets
Peters, C.F. **104**, 37
- The Magnitude Equations between the Fundamental Coordinate Systems N30, FK3, FK4
Schwan, H. **104**, 155
- Relativistic Perturbations for All the Planets
Lestrade, J.-F., Bretagnon, P. **105**, 42
- The 6-day Photometric and Spectroscopic Periods in SS 433
Mateo, J.J., Whitmire, D.P. **106**, L9
- On the Invariable Plane of the Solar System
Burkhardt, G. **106**, 133
- A Direct Method of Computing Small Divisors in Planetary Theory
Dvorak, R. **108**, 14
- Integration Constants and Mean Elements for All the Planets
Bretagnon, P. **108**, 69
- Halley's Comet: Energy and Perturbations
Buffoni, L., Manara, A., Scardia, M. **108**, 141
- Planetary Nebulae with Close Binary Nuclei-corrections to Angular Momentum Loss
Salzman, J., Livio, M., Shaviv, G. **109**, 201
- Diffusion of Keplerian Motions by a Stochastic Force. I. A General Formalism
Barge, P., Pellat, R., Millet, J. **109**, 228
- Tidal Evolution in Close Binary Systems for High Eccentricity
Hut, P. **110**, 37
- Motion of the Jovian Commensurability Resonances and the Character of the Celestial Mechanics in the Asteroid Zone: Implications for Kinematics and Structure
Torbett, M., Smoluchowski, R. **110**, 43
- Method for Constructing Periodic Orbits (Text in French)
Edelman, C. **111**, 220
- A Systematic Exploration of Three-dimensional Asteroidal Motion at the 2/1 Resonance
Froeschlé, C., Scholl, H. **111**, 346
- The Effect of Star Passages on Cometary Orbits in the Oort Cloud
Scholl, H., Cazenave, A., Brahic, A. **112**, 157
- Orbital Elements of Nereid from New Observations
Veillet, C. **112**, 277
- A Manifold of Periodic Orbits in the Planar General Three-body Problem with Equal Masses
Davoust, E., Broucke, R. **112**, 305
- Improvement of the Theories of Jupiter and Saturn by Harmonic Analysis (in French)
Simon, J.L., Francou, G. **114**, 125
- Three Characteristic Parameters of Orbits of Hilda-type Asteroids
Schubart, J. **114**, 200
- Theory for the Motion of All the Planets. The VSOP82 Solution (in French)
Bretagnon, P. **114**, 278
- Relativistic Perturbations of the Moon in ELP 2000
Lestrade, J.F., Chapront-Touzé, M. **116**, 75

Perturbations by Jupiter of the Particles Ejected from Comet Lexell

Carusi, A., Kresáková, M., Valsecchi, G.B. **116**, 201

Erratum: Tidal Evolution in Close Binary Systems for High Eccentricity

Hut, P. **116**, 351

Effects of the Earth-reflected sunlight on the orbit of the LAGEOS satellite

Anselmo, L., Farinella, P., Milani, A., Nobili, A.M. **117**, 3

Alternate period changes in close binary systems

Matese, J.J., Whitmire, D.P. **117**, L7

Comparison with observations and ephemeris of Phoebe (text in French)

Bec-Borsenberger, A., Rocher, P. **117**, 171; **50**, 423

1980-81 observations of Miranda: new orbit and mass of Ariel and Umbriel

Veillet, C. **118**, 211

A determination of the masses of Saturn and Uranus from the motion of the minor planets (944) Hidalgo and (2060) Chiron (text in German)

Landgraf, W. **119**, 95

Perturbations due to the shape of the Moon in the lunar theory ELP 2000

Chapront-Touzé, M. **119**, 256

Theory for the motion of the four large planets. The solution TOP 82 (Text in French)

Simon, J.L. **120**, 197

Periodic orbits in a three-dimensional potential (Text in French)

Hayli, A., Desolneux, N., Galletta, G. **122**, 137

The planar inverse problem with four monoparametric families of curves

Xanthopoulos, B.C., Bozis, G. **122**, 251

The lunar ephemeris ELP 2000

Chapront-Touzé, M., Chapront, J. **124**, 50

Continuing investigation of sweeping Jovian resonances. The 7:3 and 3:2 resonances with further discussion of the 2:1 resonance

Torbett, M.V., Smoluchowski, R. **127**, 345

Evolution and decay of the peculiar meteor stream associated with Comet Lexell

Carusi, A., Kresáková, M., Valsecchi, G.B. **127**, 373

New ephemerides for the Sun, the Moon, and the planets (Text in French)

Francou, G., Bergeal, L., Chapront, J., Morando, B. **128**, 124

Center-to-Limb-Variation, see Limb Brightening (Darkening)

The Analysis of Solar Limb Observations. II. Geometrical Smearing

Durrant, C.J., Kneer, F., Maluck, G. **104**, 211

Cepheids, see also Delta Scuti Stars

Ultraviolet Photometry of the Cepheid β Doradus from the A.N.S. Satellite

Lub, J., van Paradijs, J., Pel, J.W., Wesselius, P.R. **72**, 82

Double Mode Pulsation as a Resonance Phenomenon

Simon, N.R. **75**, 140

Possible Association Membership for the Three Long Period Cepheids RZ Velorum, SW Velorum, and KQ Scorpii

Turner, D.G. **76**, 350

The Yellow Supergiant HD 101947 - A Cepheid with 125 Days Period?

Eichendorf, W., Reipurth, B. **77**, 227

Two-zone Models for Multimode Cepheid Variables I. Resonances in Homogeneous and Inhomogeneous Models

Petersen, J.O. **80**, 53

Radius, Luminosity and Pulsation Mode of the δ Cephei Star AH Vel

Gieren, W. **82**, 393; **39**, 153

Photometric Variability on the Lower Part of the Cepheid Instability Strip I: Evolved Am Stars

Garrido, R., Lopez de Coca, P., Quintana, J.M., Rolland, A., Saez, M. **83**, 114

On Local Theories of Time-dependent Convection in the Stellar Pulsation Problem

Gonczy, G., Osaki, Y. **84**, 304

Two-zone Models for Multimode Cepheid Variables II. Comparison with Models for Classical Cepheids with Complicated Envelope Hydrogen Profiles

Otzen Petersen, J. **84**, 356

The Emission-line Variable in the Core of M 15

Fusi Pecci, F., Rosino, L., Voli, M. **85**, 269

Fourier Analysis of the Light Variation of ι Carinae

Cogan, B.C., Faulkner, D.J., Butler, S.J. **86**, 283

A Simple Means of Detecting Cepheid Binaries

Fernie, J.D. **87**, 227

A Discussion on Three Yellow Variable Supergiants in and Near the Cepheid Instability Strip: V 810 Cen (= HD 101947), Tr. 27-102 (= HD 159378) and BL Tel (F), Based on *VBLUW* Photometry and the Long-period Cepheids Absence in the Galaxy

van Genderen, A.M. **88**, 77

HR 7308, a New Cepheid with Variable Amplitude and Very-short Period (1.5 d)

Burki, G., Mayor, M. **91**, 115

HD 9250 and HD 14662 (HR 690), Two New Bright Cepheids with Very Small Amplitude

Burki, G., Mayor, M., Waelkens, C. **91**, 276

Radial Velocity Curve, and Radius of the Pulsating Star FG Sge

Mayor, M., Acker, A. **92**, 1

On the Nature of the 125-day Cepheid V 810 Cen (= HR 4511): IUE Spectra

Eichendorf, W., Heck, A., Isserstedt, J., Lub, J., Pakull, M., Reipurth, B., van Genderen, A.M. **93**, L5

V 553 Centauri and a Progression of Bumps in BL Herculis Light Curves

Petersen, J.O. **96**, 146

An Improvement of the Baade-Wesselink Method to Determine the Mean Radius of Pulsating Variables

Caccin, B., Onnembo, A., Russo, G., Sollazzo, C. **97**, 104

A Photometric Determination of the Metal Content for Cepheids in the Small Magellanic Cloud

Pel, J.W., van Genderen, A.M., Lub, J. **99**, L1

Cepheid Radii and Masses by Means of *VBLUW* Photometry

Sollazzo, C., Russo, G., Onnembo, A., Caccin, B. **99**, 66

VBLUW Photometry of the Very Small Amplitude and Very Short Period Cepheid HR 7308 = HD 180583

van Genderen, A.M. **99**, 386

Multivariate Analysis of Some Ultrashort Period Cepheids (USPC)

Fracassini, M., Pasinetti, L.E., Antonello, E., Raffaelli, G. **99**, 397

Détermination des rayons de céphéides. I. Vitesses radiales et dimensions de XY Cas

Imbert, M. **99**, 404; **44**, 319

HV 1369, a Cepheid at a Possible Depth of 32 Kpc in the Small Magellanic Cloud

van Genderen, A.M. **101**, 289

On the Possibility of Detecting Companions to Cepheids and Their Effect on the CORS Method

Russo, G., Sollazzo, C., Coppola, M. **102**, 20

On the Existence of Hysteresis Effects in Pulsating Stars

Auvergne, M., Baglin, A., Morel, P.-J. **104**, 47

Photoelectric Photometry of Cepheid Variables with Periods Between One and Three days

Diethelm, R., Tammann, G.A. **106**, 380; **47**, 335

Overshooting from Convective Cores and the Occurrence of Loops in the HR Diagram

Matraka, B., Wassermann, C., Weigert, A. **107**, 283

The Dwarf Cepheid NJL 79 in Omega Centauri

Jørgensen, H.E. **108**, 99

The Peculiar Classical Cepheid HR 7308

Burki, G., Mayor, M., Benz, W. **109**, 258

UV, Optical and IR Observations of the Cepheid R Muscae

Eichendorf, W., Heck, A., Caccin, B., Russo, G., Sollazzo, C. **109**, 274

On Local Theories of Time-dependent Convection in the Stellar Pulsation Problem. III. The Effect of Turbulent Viscosity (Continued)

Gonczi, G. **110**, 1

Turbulence Variations for the Three Cepheids SV Vul, X Cyg, and δ Cep

Benz, W., Mayor, M. **111**, 224

The Cepheid Period-Luminosity-Colour Relation: A Most Unsuitable Distance Indicator

Stift, M.J. **112**, 149

The Very Small Amplitude Cepheids HD 9250 and HD 14662

Burki, G., Benz, W. **115**, 30

Resonance effects in radial pulsators

Buchler, J.R. **118**, 163

The double-mode Cepheid CO Aur

Mantegazza, L. **118**, 321

A discussion on the reddening of long period Cepheids in the Magellanic Clouds

van Genderen, A.M. **119**, 192

Considerations arising from the faint absolute magnitude of halo RR Lyrae variables and an error in the Cepheid PLC relation

Clube, S.V.M., Dawe, J.A. **122**, 255

VBLUW photometry of Cepheids in the Magellanic Clouds made in 1971-1978

van Genderen, A.M. **123**, 359; **52**, 423

A photometric classification of pulsating variables with periods between one and three days

Diethelm, R. **124**, 108

Determination of radii of cepheids. II. Radial velocities and dimensions of AD Gem

Imbert, M. **124**, 153; **53**, 85

The intrinsic properties of 29 Cepheids in the Magellanic Clouds

van Genderen, A.M. **124**, 223

Overshooting from convective cores and the occurrence of loops in the HRD. II. Evolution of 5 M_{\odot} stars to the Cepheid phase

Huang, R.Q., Weigert, A. **127**, 309

Charge Transfer, see Physical Processes

Charge Transfer Ionization of Si^+ by H^+ at Thermal Energies

Gargaud, M., McCarroll, R., Valiron, P. **106**, 197

Chemical Composition, see Abundances

Chemical Reactions

Charge Transfer Reactions in Some Astrophysical Situations

Péquignot, D. **81**, 356

Molecule Formation in Interstellar Clouds by Gas Phase Reactions

Henning, K. **100**, 333; **44**, 405

The Millimeter Wave Spectrum and Discharge Chemistry of HC_3N

Winniewisser, G., Winniewisser, M., Christiansen, J.J. **109**, 141

The Temperature Dependence of the $\text{HCO}^+/\text{DCO}^+$ Abundance Ratio in Dense Interstellar Clouds

Herbst, E. **111**, 76

Model Calculations of the Molecular Composition of Interstellar Grain Mantles

Tielens, A.G.G.M., Hagen, W. **114**, 245

Loss of CO^+ Ions by Reaction with H_2 in OMC-1

Huntress, W.T., Jr., Prasad, S.S., Kemper, P.R., Cates, R.D., Bowers, M.T. **114**, 275

Surface chemistry of deuterated molecules

Tielens, A.G.G.M. **119**, 177

Does CO condense on dust in molecular clouds?

Léger, A. **123**, 271

Charged particle erosion of frozen volatiles in ice grains and comets

Johnson, R.E., Lanzerotti, L.J., Brown, W.L., Augustyniak, W.M., Mussil, C. **123**, 343

Chromosphere, see Solar Chromosphere, Stellar Chromospheres

Self-consistent models of flare heated solar chromospheres

Fang, C., Hénoux, J.C. **118**, 139

Circumstellar Matter, see also Shell Stars

Evaporation and Growth of Circumstellar Grains

Lefèvre, J. **72**, 61

Radiative Transfer in Spherical Dust Shells Using a Generalized Two-stream Eddington Approximation

Haisch, B.M. **72**, 161

Line Profiles in Expanding Envelopes

Surdej, J. **73**, 1

On the Middle Infra-red Fluorescence and Absorption of Molecules in Grain Mantles

Allamandola, L.J., Greenberg, J.M., Norman, C.A. **77**, 66

The UV Resonance Lines of ζ^1 Sco

Wolf, B., Appenzeller, I. **78**, 15

Spectra of RY Sgr near Minimum Light

Spite, F., Spite, M. **80**, 61

Circumstellar Absorption Lines in the Ultraviolet Spectrum of α Scorpii (M1.5 lab + B2.5V)

van der Hucht, K.A., Bernat, A.P., Kondo, Y. **82**, 14

Dual Aspect of the Wavelength-dependent Fluctuations of ϵ Aurigae

Canavaggia, R. **83**, 105

An OH Survey of Orion Population Stars

Gahm, G.F., Lindroos, K.P., Sherwood, W.A., Winnberg, A. **83**, 263

A Comparison of Three Methods for Computing Line Profiles in Spherical Envelopes

Bastian, U., Bertout, C., Stenholm, L., Wehrse, R. **86**, 105

Monte Carlo Analysis of Polarization by Thomson Scattering in Circumstellar Envelopes

Daniel, J.Y. **86**, 198

Monte Carlo Analysis of Polarization by Mie Scattering in Circumstellar Envelopes

Daniel, J.-Y. **87**, 204

Infrared Emission by Dust Grains near Variable Primary Sources.

II. A Model for Infrared Novae

Bode, M.F., Evans, A. **89**, 158

Highly Ionized Species in the Spectra of Small Magellanic Cloud Stars

Prévot, L., Laurent, C., Paul, J., Vidal-Madjar, A., Audouze, J., Ferlet, R., Lequeux, J., Maucherat-Joubert, M., Prévot-Burnichon, M.L., Rocca-Volmerange, B. **90**, L13

Circumstellar Absorption and Intrinsic Colours of Massive Stars

Ardeberg, A., Maurice, E. **91**, 53

Narrow Ultraviolet Absorption Lines of Nova Cygni 1978

Friedjung, M. **93**, 320

Observations of Late Type Objects with a New Spectrophotometer in the 8-13 μ m Range

Schulte in den Bäumen, J., Hebele, H., Hölzle, E., Ortlieb, N. **94**, 280

Detection of Interstellar C₂ toward Cygnus OB 2 No 12, ζ Persei, α Andromedae, ζ Ophiuchi, and ν Cygni

Cosmovici, C.B., Strafella, F. **98**, 408

Observations of the Brightness Structure of α Orionis

Ricort, G., Aime, A., Vernin, J., Kadiri, S. **99**, 232

The Expanding Envelope of Tau Scorpii: A Detailed UV-line Fit

Hamann, W.-R. **100**, 169

The Variable Shell Star HR 5999: V. The Spectral Energy Distribution

Thé, P.S., Tjin a Djie, H.R.E., Bakker, R., Bastiaansen, P.A., Burger, M., Cassatella, A., Fredga, K., Gahm, G., Liseau, R., Smyth, M.J. **100**, 334; **44**, 451

A Polarimetric Study of U Cephei. Part II (Observations)

Pirola, R. **100**, 334; **44**, 461

Molecular Abundances in IRC + 10216

Lafont, S., Lucas, R., Omont, A. **106**, 201

High Sensitivity Molecular Line Observations of IRC + 10216

Olofsson, H., Johansson, L.E.B., Hjalmarson, Å., Nguyen-Quang-Rieu **107**, 128

Infrared Photometry of Southern Be Stars

Dachs, J., Wamsteker, W. **107**, 240

Radio Emission from Young Stars

Felli, M., Gahm, G.F., Harten, R.H., Liseau, R., Panagia, N. **107**, 354

An H II Region Near NML Cygnus

Habing, H.J., Goss, W.M., Winnberg, A. **108**, 412

A Linear Polarization Survey of T Tauri Stars

Bastien, P. **108**, 417; **48**, 153

The Interacting Early-type Contact Binary SV Centauri

Drechsel, H., Rahe, J., Wargau, W., Wolf, B. **110**, 246

On the Properties of the Circumstellar Matter Around the Bright Young Variable Shell Star HR 5999

Andersen, J., Gahm, G.F., Krelowski, J. **113**, 176

Numerical Simulation of Radiative Transfer in Circumstellar Dust Shells. I. Spherical Shells

Lefèvre, J., Bergeat, J., Daniel, J.-Y. **114**, 341

SiO isotope emission from Orion: a model for IRC2

Deguchi, S., Nguyen-Quang-Rieu **117**, 314

Evidence for outburst in the shell star 17 Lep derived from ultraviolet spectra

Molaro, P., Morossi, C., Ramella, M. **119**, 160

The pulsation of carbon Miras

Bergeat, J., Sibai, A.M. **119**, 207

The ultraviolet reddening of Be stars

Schild, R. **120**, 223

Hydrogen sulfide in a circumstellar envelope

Ukita, N., Morris, M. **121**, 15

Radio structure of the low excitation planetary nebula M 1-6

Kwok, S., Purton, C.R. **122**, 346

Three-micron emission features in Herbig Be/Ae stars and related objects

Whittet, D.C.B., Williams, P.M., Bode, M.F., Davies, J.K., Zealey, W.J. **123**, 301

The peculiar circumstellar envelope around IRC + 10420

Diamond, P.J., Norris, R.P., Booth, R.S. **124**, L4

AB Aurigae and its variable hydrogen lines

Finkenzeller, U. **124**, 157

A study of UV spectra of ζ Aur/ VV Cep stars. IV. System parameters and mass-loss of δ Sge

Reimers, D., Schröder, K.-P. **124**, 241

The maser strength of OH/IR stars, evolution of mass loss and the creation of a superwind

Baud, B., Habing, H.J. **127**, 73

IUE observations of the eclipsing binaries TV Cas and YZ Cas

de Landtsheer, A.C., Mulder, P.S. **127**, 297

Close Binaries, see also Binary Stars, Cataclysmic Variables, Eclipsing Binaries, W Ursae Majoris Stars, X-ray Binaries

Non-conservative Evolution of Massive Close Binaries Including Stellar Wind Mass Loss

Vanbeveren, D., De Grève, J.P., van Dessel, E.L., de Loore, C. **73**, 19

On the Existence of Undersize Subgiant Components in Close Binary Stars

Cester, B., Giuricin, G., Mardirossian, F., Mezzetti, M., Maceroni, C., Mancuso, S. **73**, 31

Close Binary Systems in Globular Clusters

Alexander, M.E., Budding, E. **73**, 227

On the Absence of Ellipsoidal Light Variations in X Per

Maceroni, C., Persi, P., Spada, G. **76**, 217

A Long Period Variation in the Light Curve of TV Cassiopeiae and Its Interpretation

Walter, K. **76**, 369; **37**, 493

Photometric Investigation of the Algol System XZ Sagittarii

Kappelman, N., Walter, K. **78**, 249; **38**, 161

Dimensions and Evolutionary State of the Early-type Contact Binary V701 Scorpii

Andersen, J., Nordström, B., Wilson, R.E. **82**, 225

Mass Loss and Mass Transfer in Algols: a Check on Some Current Theoretical Views

Mezzetti, M., Giuricin, G., Mardirossian, F. **83**, 217

The Effect of Stellar Evolution on the Synchronous Rotation of Components of Massive Close Binaries

Sutantyo, W., De Grève, J.P., de Loore, C. **83**, 252

Infrared Observations of Binary Stars. II

Needham, J.D., Phillips, J.P., Selby, M.J., Sanchez Magro, C. **83**, 370

Comparison Between the Observations and Evolutionary Calculations for Massive Close Binary Systems

Vanbeveren, D., Loore, C. de **86**, 21

Period Changes in Close Binaries Caused by the Presence of a Third Companion

Havnes, O. **92**, 151

- IUE and Optical Observations of V 861 Scorpii
Howarth, I.D., Wilson, R., Carter, B.S., Menzies, J.W., Roberts, G., Whitelock, P.A., van Dessel, E.L., de Loore, C., Burger, M., Sandford, M.C.W. **93**, 219
- Implications of Photometric and Spectroscopic Periods of SS 433
Katz, J.I. **95**, L15
- The Mass and Mass Ratio Distribution of Massive O Type Single Stars and Binaries
Vanbeveren, D. **95**, 321
- Mass Transfer in a Binary System: The Evolution of the Mass-giving Helium Star
Delgado, A.J., Thomas, H.-C. **96**, 142
- Investigation of the Statistical Properties and Nature of the Run-away Stars
Isserstedt, J., Feitzinger, J.V. **96**, 181
- Gas Streaming in Semi-detached Binary Systems
van Houten, C.J. **97**, 46
- The Initial Mass Ratio of Solar Type Contact Binaries
van 't Veer, F. **98**, 213
- Tidal Evolution in Close Binary Systems
Hut, P. **99**, 126
- On the Spin-up of the Mass Accreting Component in a Close Binary System
Packet, W. **102**, 17
- The Ultraviolet Spectrum of UW Canis Majoris
Drechsel, H., Rahe, J., Kondo, Y., McCluskey Jr., G.E. **102**, 282; **45**, 473
- Mass Loss in Close Binary Systems
Giannuzzi, M.A. **103**, 111
- Image Tube Spectroscopic Studies of Rapid Variables. IV. Spectroscopic and Photometric Observations of AE Aquarii
Chincarini, G., Walker, M.F. **104**, 24
- Planetary Nebulae with Close Binary Central Stars
Livio, M. **105**, 37
- The Old-nova GK Per. II. Optical Outbursts
Bianchini, A., Sabbadin, F., Hamzaoglu, E. **106**, 176
- LB 3459 - An O-type Subdwarf Eclipsing Binary System. Non-LTE Analysis of the Primary
Kudritzki, R.P., Simon, K.P., Lynas-Gray, A.E., Kilkenny, D., Hill, P.W. **106**, 254
- On the Linear Adiabatic Oscillations of a Uniformly and Synchronously Rotating Component of a Binary
Martens, L., Smeyers, P. **106**, 317
- Photometric and Astrometric Observations of Close Visual Binaries
Rakos, K.D., Albrecht, R., Jenkner, H., Kreidl, T., Michalke, R., Oberlacher, D., Santos, E., Schermann, A., Schnell, A., Weiss, W. **106**, 379; **47**, 221
- Period Changes in Detached Close Binary Systems Due to Anisotropic Ejection of Mass
Van Hamme, W. **107**, 397
- The Period Behaviour of the Detached Close Binary System TX Herculis
Van Hamme, W. **107**, 409
- HR 4975: A Possible Early-Type Contact System with Unequal Components
Waelkens, C., Bartholdi, P. **108**, 51
- Detached → Contact Scenario for the Origin of WUMa Stars
Vilhu, O. **109**, 17
- Observations and Analysis of the Light Curve of AE Phoenicis in 1978
Walter, K. **109**, 107
- A Brightening of the Symbiotic Variable SY Muscae
Michalitsianos, A.G., Kafatos, M., Feibelman, W.A., Wallerstein, G. **109**, 136
- HD 134518: A Main Sequence Detached Eclipsing Binary
Giuricin, G., Mardirossian, F., Mezzetti, M. **109**, 366
- The Ellipsoidal Binary V470 Cygni
Russo, G., Milano, L., Maceroni, C. **109**, 368
- Tidal Evolution in Close Binary Systems for High Eccentricity
Hut, P. **110**, 37
- Three-colour Photoelectric Observations of the Eclipsing Binary TT Her
Burchi, R., Dipaolantonio, A., Mancuso, S., Milano, L., Vittone, A. **111**, 212; **49**, 129
- Forced Oscillations in Binary Systems. Toroidal Modes
Rocca, A. **111**, 252
- Meridional Circulation in Optically Thick Accretion Disks
Cabot W., Savedoff, M.P. **112**, L1
- On the Origin of Low Mass Cataclysmic Binaries
Livio, M. **112**, 190
- Conservative Mass Transfer Calculations for Semidetached Binaries Using Response Functions
Hauschildt, M. **112**, 386
- The Hot Component of KS Persei (HD 30353)
Drilling, J.S., Schönberner, D. **113**, L22
- The Binary System Sirius in the Context of Stellar Evolution
D'Antona, F. **114**, 289
- Hydrodynamical Calculations of Accretion Disks in Close Binary Systems. I. Method
Hensler, G. **114**, 309
- Hydrodynamical Calculations of Accretion Disks in Close Binary Systems. II. Models
Hensler, G. **114**, 319
- Mass Transfer in a Low Mass Semidetached Binary, Taking into Consideration Nonequilibrium Effects
Hauschildt, M. **114**, 407
- Photometric Observations of CN Orionis
Schoembs, R. **115**, 190
- CI Cyg: The Stage of Case C Mass Transfer
Iijima, T. **116**, 210
- Erratum: Tidal Evolution in Close Binary Systems for High Eccentricity
Hut, P. **116**, 351
- Solid white dwarfs, neutron stars and type I supernovae
Labay, J., Canal, R., Isern, J. **117**, L1
- Alternate period changes in close binary systems
Matese, J.J., Whitmire, D.P. **117**, L7
- The binary model for type I supernovae: theoretical rates
Greggio, L., Renzini, A. **118**, 217
- A spectrographic study of the β Cephei star 16 Lacertae
Le Contel, J.-M., Ducalet, D., Jarzembowski, T., Jerzykiewicz, M., Valtier, J.-C. **118**, 294
- The period distribution of eclipsing binary systems
Giuricin, G., Mardirossian, F., Mezzetti, M. **119**, 218
- The influence of overshooting on the evolution of massive close binaries
Vanbeveren, D. **119**, 239
- The symbiotic star CH Cyg: the occasional transition from an unstable to a stable accretion disk
Duschl, W.J. **119**, 248
- The combined effect of mass loss and overshooting. III. Evolutionary scenarios for massive close binaries
Doom, C., de Grève, J.P. **120**, 97

The early B-type eclipsing binary FZCma (HD 52942): a massive triple system

Moffat, A.F.J., Vogt, N., Vaz, L.P.R., Gronbech, B. **120**, 278

An observational study of the influence of close companions on the pulsations of β Cephei stars

Waelkens, C., Rufener, F. **121**, 45

Lightcurve synthesis of the semi-detached binaries LT Her, WX Eri, AW Cam

Russo, G., Milano, L. **121**, 331; **52**, 311

The formation of massive white dwarfs in cataclysmic binaries

Law, W.Y., Ritter, H. **123**, 33

Rotation and tidal interactions in BY Draconis binaries

Edwards, D.A. **123**, 316

Nutation-like effects in SS 433

Ciatti, F., Mammano, A., Iijima, T., Vittone, A. **123**, 360; **52**, 443

Light curves and elements of AH Virginis

Niarchos, P.G. **124**, 151; **53**, 13

Stellar activity and the period gap in cataclysmic variables

Spruit, H.C., Ritter, H. **124**, 267

Mass transfer in close binary systems: original and remnant masses

Giuricin, G., Mardirossian, F., Mezzetti, M. **125**, 388

Period-activity relations in close binaries

Vilhu, O., Rucinski, S.M. **127**, 5

Clouds, see Interstellar Clouds

The Formation of Planets and Satellites from Self-similar Disks

Wesson, P.S. **76**, 200

Clusters, see Clusters of Galaxies; Clusters, globular; Clusters, open

The Dependence of Statistical Results from N-Body Calculations on N

Smith, H. Jr. **76**, 192

Two Component Emden Sphere

Capelato, H.V., Gerbal, D., Salvador Sole, E., Mathez, G., Mazure, A., Roland, J. **78**, 252; **38**, 295

Self-Similarity and the Angular Momenta of Astronomical Systems. A Basic Rule in Astronomy

Wesson, P.S. **80**, 296

The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky. VII

Holmberg, E.B., Lauberts, A., Schuster, H.E., West, R.M. **82**, 394; **39**, 173

Preliminary Colour-magnitude Diagrams of 20 Star Clusters and Their Adjoining Fields in the Small Magellanic Cloud

Kontizas, M. **85**, 265; **40**, 151

Etude de quelques amas faibles du Grand Nuage de Magellan

Martin, N., Rousseau, J. **88**, 283; **41**, 219

Galactical Tidal Limits on Star Clusters. I. Stability of Stellar Orbits and the Zero Velocity Surfaces

Keenan, D.W. **95**, 334

Galactic Tidal Limits on Star Clusters. II. Tidal Radius and Outer Dynamical Structure

Keenan, D.W. **95**, 340

Investigation of the Statistical Properties and Nature of the Run-away Stars

Isserstedt, J., Feitzinger, J.V. **96**, 181

The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky - VIII

Lauberts, A., Holmberg, E.B., Schuster, H.-E., West, R.M. **97**, 415; **43**, 307

Vitesses radiales dans l'amas NGC 3144 mesurées au prisme objectif de 40 cm de l'Observatoire Européen Austral

Amieux, G., Burnage, R. **99**, 204; **44**, 101

The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky. IX

Lauberts, A., Holmberg, E.B., Schuster, H.-E., West, R.M. **104**, 172; **46**, 311

Clusters, globular

Dynamical Friction in the Galactic Disk

Keenan, D.W. **71**, 245

The Globular Cluster NGC 6541

Alcaino, G. **71**, 274; **35**, 233

Close Binary Systems in Globular Clusters

Alexander, M.E., Budding, E. **73**, 227

Evolutionary Structure of Large Stars Clusters

Angeletti, L., Giannone, P. **74**, 57

Far Ultraviolet Photometry of Globular Clusters with ANS. I.

Two Different Groups of Blue Horizontal Branch Clusters

van Albada, T.S., de Boer, K.S., Dickens, R.J. **75**, L11

On the Period-amplitude Relation for RR Lyrae Stars in Globular Clusters and the Anomalous Horizontal Branch in ω Centauri

Caloi, V. **75**, 247

Tables of Theoretical Isochrones for Globular Clusters

Bertelli, G., Bolton, A., Chiosi, C., Nasi, E. **75**, 261; **36**, 429

A Comparison of the Star Density Distribution of "Red and Blue" Globular Clusters of the Large Magellanic Cloud

Geyer, E.H., Hopp, U., Kiehl, M., Witzigmann, S. **77**, 61

The Globular Cluster NGC 1261

Alcaino, G. **77**, 372; **38**, 61

A Preliminary Investigation of a Distant Globular Cluster in Eridanus (GC 0422-213)

West, R.M., Bartaya, R.A. **77**, 372; **38**, 69

Limits to the Incidence of Planetary Nebulae in Globular Clusters

Phillips, J.P. **79**, 31

Faint Nebulosity near ω Centauri

Cannon, R.D. **81**, 379

RR Lyrae Pulsators as Helium Indicators in Globular Clusters

Caputo, F., Castellani, V., Tornambè, A. **82**, 79

Helium Abundance Variation Among Galactic Globular Clusters?

Caputo, F., Castellani, V., Martini, A. **82**, 305

The Globular Cluster NGC 6144 and Its Neighbouring Region

Alcaino, G. **83**, 383; **39**, 315

Dynamical Evolution of Cluster Models with a Continuous Stellar Mass Loss

Angeletti, L., Giannone, P. **85**, 113

The Emission-line Variable in the Core of M 15

Fusi Pecci, F., Rosino, L., Voli, M. **85**, 269

Radio Observations of Globular Clusters and Galactic Bulge X-ray Sources

Gopal-Krishna, Steppe, H. **88**, 354

The Overall Distribution of Mass in Our Galaxy

Miyamoto, M., Satoh, C., Ohashi, M. **90**, 215

Search for (Globular) Clusters in M 31. I.: Candidates in a 70' Square Field Centered on M 31

Battistini, P., Bonoli, F., Braccetti, A., Fusi Pecci, F., Malagnini, M.L., Marano, B. **92**, 325; **42**, 357

A Theoretical Scenario for the Evolutionary Status of HB Stars in RR-Lyrae Rich Galactic Globular Clusters

Castellani, V., Tornambè, A. **96**, 207

- Radial Metal Variation as Possible Explanation of Colour Gradients in the Cores of Globular Clusters
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **96**, 254
- Metallicity Distribution in the System of Globular Clusters
Colin, J. **97**, 33
- A Tentative Explanation of the Colour Gradients in the Cores of Globular Clusters
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **98**, 344
- A Dwarf Cepheid in the Globular Cluster Omega Centauri?
Niss, B. **98**, 415
- Theoretical and Observed UV Energy Distributions of 7 Globular Clusters
Nesci, R. **99**, 120
- The Tightly-bound Globular Cluster NGC 6388
Alcaino, G. **99**, 202; **44**, 33
- The Globular Cluster NGC 6626
Alcaino, G. **99**, 402; **44**, 191
- The Color Magnitude Diagram for Stars in the Central Part of the Globular Cluster M 15
Aurière, M., Cordoni, J.-P. **100**, 307
- On the Radial Color Distribution in the Globular Cluster M5 = NGC 5904
Buonanno, R., Castellani, V., Corsi, C.E., Fusi Pecci, F. **101**, 1
- Infrared Studies of Four Highly Reddened Globular Clusters: Palomar 2, Palomar 8, Palomar 10, and NGC 6749
Canterna, R., Rosino, L. **101**, 418; **45**, 53
- On the Effects of Radiation Pressure in the Cores of Globular Clusters
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **102**, 250
- Membership in the Field of Globular Cluster M56
Rishel, B.E., Sanders, W.L., Schröder, R. **102**, 281; **45**, 443
- Helium Diffusion in Horizontal-Branch-Star Evolutionary Models
Giannone, P., Rossi, L. **102**, 386
- UBV Observations of Globular Clusters in the Magellanic Clouds
van den Bergh, S. **103**, 208; **46**, 79
- Far Ultraviolet Investigation of Three Nuclei of Globular Clusters
Caloi, V., Cassatella, A., Castellani, V., Macchetto, F., Melnick, J. **103**, 386
- Ultraviolet Spectrophotometry of the Galactic Globular Cluster M 5
Altamore, A., Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **103**, 424
- A Carbon Star in the Globular Cluster Lindsay 102
Danks, A.C. **106**, 4
- Position, Magnitudes and Color for Stars in the Central Part of the X-ray Globular Cluster M 15
Aurière, M., Cordoni, J.-P. **106**, 179; **46**, 347
- The O Type Subdwarf ROB 162 in the Globular Cluster NGC 6397
Caloi, V., Castellani, V., Panagia, N. **107**, 145
- Search for (Globular) Clusters in M31. II: Photographic photometry of the Candidates in a 70' Square Field Centered on M31
Buonanno, R., Corsi, C.E., Battistini, P., Bónoli, F., Fusi Pecci, F. **107**, 412; **47**, 451
- The Dwarf Cepheid NJL 79 in Omega Centauri
Jørgensen, H.E. **108**, 99
- Luminosity Functions of Star Clusters in the Small Magellanic Clouds
Kontizas, M., Kontizas, E. **108**, 344
- Optical Structure of the Core of the Dynamically Advanced Globular Cluster NGC 6397
Aurière, M. **109**, 301
- Dissipative Evolution of Collisionless Stellar Systems. I. Cooling and Heating of a Stellar System by Binary Stars
Ozernoy, L.M., Dokuchaev, V.I. **111**, 1
- Dissipative Evolution of Collisionless Stellar Systems. II. Influence of Binaries on the Evolution of Globular Clusters and Galactic Nuclei
Dokuchaev, V.I., Ozernoy, L.M. **111**, 16
- Observed Radii and Structural Parameters of Clusters in the SMC
Kontizas, M., Danezis, E., Kontizas, E. **111**, 209; **49**, 1
- The Influence of CN Abundances on the Evolution of Main Sequence of Low-mass Stars
Bazzano, A., Caputo, F., Sestili, M., Castellani, V. **111**, 312
- Search for (Globular) Clusters in M 31. III. Structural Properties: X-ray Sources and Comparison with Galactic Globulars
Battistini, P., Bónoli, F., Buonanno, R., Corsi, C.E., Fusi Pecci, F. **113**, 39
- Do Black Holes Exist at the Centres of Globular Clusters?
Gurzadyan, V.G. **114**, 71
- Photometry in the Central Region of the Globular Cluster NGC 7099
Alcaino, G., Wamsteker, W. **114**, 422; **50**, 141
- Abundances in Metal-poor Stars. I. The Globular Clusters NGC 2808, NGC 3201, NGC 6397, and M 22
Gratton, R.G. **115**, 171
- Absolute Ultraviolet Fluxes of Elliptical Galaxies as Observed with the Astronomical Netherlands Satellite (ANS)
de Boer, K.S. **115**, 218; **50**, 247
- Abundances in Metal-poor Stars. II. The Anomalous Globular Cluster ω Centauri
Gratton, R.G. **115**, 336
- Positions, magnitudes and colors for stars in the globular cluster M15
Buonanno, R., Buscema, G., Corsi, C.E., Iannicola, G., Fusi Pecci, F. **118**, 209; **51**, 83
- The color-magnitude diagram for stars in the central part of the globular cluster NGC 7089 (M 2)
Aurière, M., Cordoni, J.-P. **118**, 210; **51**, 135
- On the stellar content of the galactic globular cluster M5
Altamore, A., Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **118**, 332
- Four-colour photometry of some globular cluster giants in the Galaxy and the Magellanic Clouds
Richtler, T., Nelles, B. **119**, 75
- The globular cluster NGC 6544
Alcaino, G. **121**, 163; **52**, 105
- Observed radii and structural parameters of clusters in the SMC. II
Kontizas, E., Kontizas, M. **121**, 164; **52**, 143
- Stability of star clusters as galactic satellites. I. Motion in the cluster orbital plane
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **121**, 183
- Stability of star clusters as galactic satellites. II. Motion perpendicular to the cluster orbital plane
Angeletti, L., Giannone, P. **121**, 188
- IUE observations of the nucleus of the galactic globular cluster NGC 2808
Caloi, V., Castellani, V. **121**, 198
- An ultraviolet approach to M 15
Nesci, R. **121**, 226
- Predicted and observed UV spectrum of M 5
Nesci, R. **121**, 235

The galactic globular cluster system: helium content versus metallicity

Caputo, F., Cayrel, R., Cayrel de Strobel, G. **123**, 135

The canonical anticorrelation between Y and Z in galactic globular clusters and the case of the pulsators in M15

Caputo, F., Castellani, V., di Gregorio, R. **123**, 141

Positions, magnitudes and colours for stars in the core of M 3

Aurière, M., Cordoni, J.-P. **123**, 358; **52**, 383

Positions, magnitudes, and colors for stars in the globular cluster M 92

Buonanno, R., Buscema, G., Corsi, C.E., Iannicola, G., Smriglio, F., Fusi Pecci, F. **124**, 151; **53**, 1

NGC 6256, a galactic globular cluster

Alcaino, G. **124**, 152; **53**, 47

A search for neutral hydrogen near nine globular clusters

Birkinshaw, M., Ho, P.T.P., Baud, B. **125**, 271

Ellipticity variations within some globular clusters of the Galaxy and the Magellanic Clouds

Geyer, E.H., Hopp, U., Nelles, B. **125**, 359

Automated photographic photometry of stars in globular clusters

Buonanno, R., Buscema, G., Corsi, C.E., Ferraro, I., Iannicola, G. **126**, 278

Stellar evolution of globular cluster giants in which the external layers are CNO-enriched

Chieffi, A., D'Antona, F. **126**, 372

Membership of above horizontal branch stars in the globular cluster NGC 5466

Brosche, P., Geffert, M. **127**, 415

Stellar collapse, pulsars, and globular clusters

Katz, J.I. **128**, L1

Helium abundance in globular clusters: the R-method

Buzzoni, A., Fusi Pecci, F., Buonanno, R., Corsi, C.E. **128**, 94

The galactic Globular Cluster System: the metallicity ranking and the second parameter problem

Caputo, F. **128**, 190

Metal abundance and age of the globular cluster NGC 6397 from photoelectric *uvby- β* photometry of turn-off stars

Ardeberg, A., Lindgren, H., Nissen, P.E. **128**, 194

The nature of the radio source in M3

McLean, B.J., Viner, M.R., Hughes, V.A. **128**, 434

Clusters of Galaxies

A Complex Radio Source in the Center of Abell 2218

Schallwich, D., Wielebinski, R. **71**, L15

Study of the Large Virgo Cluster Area from Taxonomy

Paturel, G. **71**, 106

A Westerbork Survey of Rich Clusters of Galaxies. VIII. Observations of the Cluster Abell 1367 at 610 and 1415 MHz

Gavazzi, G. **72**, 1

A Westerbork Survey of Rich Clusters of Galaxies. IX. The Radio Luminosity Function of the Hercules Supercluster at 610 MHz

Perola, G.C., Valentijn, E.A. **73**, 54

A Radio Survey of Clusters of Galaxies. II. 11.1 cm Observations of A 85, A 407, A 514, A 568, A 602, A 1361, A 1775, A 2036, A 2079, A 2224, A 2241, A 2365, and A 2634

Waldthausen, H., Haslam, C.G.T., Wielebinski, R., Kronberg, P.P. **73**, 369; **36**, 237

The Cosmological Deceleration Parameter and the Sunyaev-Zeldovich Effect

Fabbri, R., Melchiorri, F., Mencaraglia, F., Natale, V. **74**, L20

The X-ray Cluster A 2142

Hintzen, P., Scott, J.S. **74**, 116

The Structure of Nearby Groups of Galaxies: Quantitative Membership Probabilities

Materne, J. **74**, 235

Cosmic Distances from X-ray and Microwave Observations of Clusters of Galaxies

Cavaliere, A., Danese, L., Zotti, G. **75**, 322

Galaxy Collisions and Their Influence on the Dynamics and Evolution of Groups and Clusters of Galaxies

Roos, N., Norman, C.A. **76**, 75

610 MHz Observations of the Perseus Cluster of Galaxies with the Westerbork Synthesis Radio Telescope

Gisler, G.R., Miley, G.K. **76**, 109

Improved Limits on Intergalactic Intracluster H I in the Coma Cluster

Tarter, J.C., Wright, M.C.H. **76**, 127

The Two-point Angular Correlation Function between Quasars and Rich Clusters of Galaxies

Roberts, D.H., O'Dell, S.L. **76**, 254

Evidence of an Intra Cluster Medium in the Hercules Supercluster

Valentijn, E.A. **78**, 362

A Detailed Photometric and Structural Study of the Southern Cluster of Galaxies CA 0340-538

Quintana, H., Havlen, R.J. **79**, 70

The Radio Properties of the X-ray Cluster Abell 2256

Bridle, A.H., Fomalont, E.B., Miley, G.K., Valentijn, E.A. **80**, 201

A Westerbork Survey of Clusters of Galaxies. I. A 610 MHz Survey of Extended Radio Emission from 8 Abell Clusters

Valentijn, E.A. **80**, 329; **38**, 319

A Search for Broad Band H I Emission from Clusters of Galaxies

Shostak, G.S., Gilra, D.P., Noordam, J.E., Nieuwenhuijzen, H., de Graauw, T., Vermue, J. **81**, 223

A New Statistical Test for Galaxy Clustering

Bonometto, S.A., Lucchin, F. **82**, 287

On Velocity Dispersions of Galaxies in Rich Clusters

Danese, L., De Zotti, G., di Tullio, G. **82**, 322

Westerbork Synthesis Observations of 8 Clusters of Galaxies which Contain Tailed Radio Galaxies

Harris, D.E., Kapahi, V.K., Ekers, R.D. **82**, 394; **39**, 215

The H I Deficiency of the Virgo Cluster Spirals

Chamaraux, P., Balkowski, C., Gérard, E. **83**, 38

Emden Sphere Embedded in a Background

Salvador-Solé, E., Gerbal, D. **83**, 95

The Low and High Redshift Neutral Hydrogen Associated with Stephan's Quintet

Allen, R.J., Sullivan, III, W.T. **84**, 181

A Westerbork Survey of Rich Clusters of Galaxies. XII. Observations of A 2197 and A 2199 at 610 MHz

Gavazzi, G., Perola, G.C. **84**, 228

A Westerbork Survey of Rich Clusters of Galaxies. XI. Observations of the Cancer Cluster at 610 MHz

Perola, G.C., Tarengi, M., Valentijn, E.A. **84**, 245

A UVVR Photo-electric Sequence in Piscis Austrinus

Bunclark, P.S., Fraser, C.W., Dodd, R.J. **84**, 269; **40**, 81

Secondary Peak in Clusters of Galaxies - A Clue to Their Formation?

Dekel, A., Shaham, J. **85**, 154

Mass-to-light Ratios of Nearby Groups of Galaxies

Materne, J. **86**, 91

Linear Clustering of Galaxies in Low-density Universes

Occhionero, F., Vittorio, N., Carnevali, P., Santangelo, P. **86**, 212

- Dynamical Study of the Cluster of Galaxies Abell 194 by the Multi Mass Mode
Capelato, H.V., Gerbal, D., Mathez, G., Mazure, A., Roland, J., Salvador-Solé, E. **87**, 132
- Superclusters and the Secondary Maximum in the Cluster Density Profile. II.
Gerbal, D., Salvador-Solé, E. **87**, 165
- Scale Covariant Gravitation: Virial Masses of Groups of Galaxies
Klinkhamer, F.R. **87**, 354
- A Westerbork Survey of Clusters of Galaxies. XIII. Deep 610 MHz Source Counts from the Cancer Cluster Field
Valentijn, E.A. **89**, 234
- A Radio Survey of Clusters of Galaxies. III. 6.2 cm Observations, Radio Spectra and Optical Identifications of Sources in 29 Abell Clusters
Andernach, H., Waldthausen, H., Wielebinski, R. **89**, 252; **41**, 339
- A Radio Continuum Survey at 1.4 GHz of the Galaxies in the Virgo Region
Kotanyi, C.G. **89**, 253; **41**, 421
- Quasars, Isotropy of H_0 and the Local Supercluster of Galaxies
Reboul, H.J. **89**, 272
- Does the Binding Energy of Binaries Masquerade as Missing Mass?
Wesson, P.S. **90**, 1
- Radio and X-ray Observations of Abell 754
Harris, D.E., Costain, C.H., Strom, R.G., Pineda, F.J., Delvalle, J.P., Schnopper, H.W. **90**, 283
- Groups of Galaxies with Large Crossing Times
Klinkhamer, F.R. **91**, 365
- On the Derivation of Higher Order Correlation Functions
Bonometto, S.A., Sharp, N.A. **92**, 222
- Westerbork Observations of B2 Radio Sources in Abell Clusters of Galaxies
Harris, D.E., Lari, C., Vallée, J.P., Wilson, A.S. **92**, 324; **42**, 319
- X-ray Clusters and the Electromagnetic Spectrum of Galaxies
Benford, G., Cavallo, C. **93**, 171
- Clustering of Blue Objects
Erculiani Abati, L. **93**, 282
- On the Origin of the Intergalactic Magnetic Field and of the Radio Halo Associated with the Coma Cluster of Galaxies
Roland, J. **93**, 407
- Superclusters and Lyman α Absorption Lines in Quasars
Oort, J.H. **94**, 359
- Evidence for the Location of Quasars in Superclusters
Oort, J.H., Arp, H., de Ruiter, H. **95**, 7
- An Analysis of the Redshift-magnitude Band Phenomenon in the Coma Cluster
Nami, D., Pittella, G., Trevese, D., Vignato, A. **95**, 188
- A Radio Survey of Clusters of Galaxies IV. 11.1 cm Observations of 19 Abell Clusters in Total Intensity and Polarization
Andernach, H., Schallwisch, D., Haslam, C.G.T., Wielebinski, R. **95**, 393; **43**, 155
- Observations of Galaxies in the Southern Cluster CA 0340-538
Chincarini, G., Tarengi, M., Bettis, C. **96**, 106
- The Radio Continuum Radiation of Spiral Galaxies in Multiple Systems
Hummel, E. **96**, 111
- Theoretical Multi-mass Models for Clusters of Galaxies
Capelato, H.V., Gerbal, D., Mathez, G., Mazure, A., Roland, J., Salvador-Solé, E. **96**, 235
- The Formation of Cavities around Cosmological Condensations
Occhionero, F., Vecchia-Scavalli, L., Vittorio, N. **97**, 169
- Erratum: Groups of Galaxies with Large Crossing Times
Klinkhamer, F.R. **97**, 414
- On Dynamic Gas Ablation from Spherical Galaxies
Nepveu, M. **98**, 65
- Interactions in Two Contrasting Examples of Galactic Groups
Danks, A.C., Alcaïno, G. **98**, 223
- Mass-to-energy Relations for Galaxies and Clusters of Galaxies
Kaasta, J.S., van Bueren, H.G. **99**, 7
- Cavities in High Density Universes
Occhionero, F., Vecchia-Scavalli, L., Vittorio, N. **99**, L12
- Optical Studies of Southern X-ray Clusters of Galaxies I. Velocity Dispersions for A1146, A754, Ser 40/6, Klemola 21 and 2A1326-311
Melnick, J., Quintana, H. **99**, 204; **44**, 87
- Observation of the Cluster of Galaxies A 401 at 11 cm
Roland, J., Sol, H., Pauliny-Toth, I., Witzel, A. **100**, 7
- New Models for the Intracuster Gas
Cavaliere, A., Fusco-Femiano, R. **100**, 194
- The Combined Effect of Radioemissivity and Galaxy Type on Redshift
Moles, M., Nottale, L. **100**, 258
- 408 MHz Observations of Clusters of Galaxies. I. Halo Sources in the Coma-A 1367 Supercluster
Ballarati, B., Feretti, L., Ficarra, A., Gavazzi, G., Giovannini, G., Nanni, M., Olori, M.C. **100**, 323
- Redshifts of Southern Clusters of Galaxies
West, R.M., Frandsen, S. **100**, 331; **44**, 329
- Imprints of the Damping of Adiabatic Perturbations
Dekel, A. **101**, 79
- Some Problems with the Evolution of Gas in Clusters of Galaxies
Nepveu, M. **101**, 362
- Erratum: On the Origin of the Intergalactic Magnetic Field and the Radio Halo Associated with the Coma Cluster of Galaxies
Roland, J. **102**, 142
- Observations of the Head-tail Radio Galaxy NGC 3862 (3C 264) at 0.6, 1.4, and 5.0 GHz
Gavazzi, G., Perola, G.C., Jaffe, W. **103**, 35
- The Luminosity Function of Virgo Cluster Galaxies
Kraan-Korteweg, R.C. **104**, 280
- A Comparison of Simulated Galaxy Clustering Models with Observations
Zieba, S., Urbanik, M., Rudnicki, K., Aarseth, S.J. **105**, 21
- Radio and Optical Observations of 9 Nearby Abell Clusters: A262, A347, A569, A576, A779, A1213, A1228, A2162, A2666
Fanti, C., Fanti, R., Feretti, L., Ficarra, A., Gioia, I.M., Giovannini, G., Gregorini, L., Mantovani, F., Marano, B., Padrielli, L. **105**, 200
- Quasar-generating Superclusters: An Explanation for a Clumpy Quasar Sky?
de Ruiter, H.R., Zuiderwijk, E.J. **105**, 254
- Perturbations of the Hubble Flow
Occhionero, F., Vittorio, N., Carnevali, P., Santangelo, P. **107**, 172
- Structure in the Universe from One Massive Neutrino?
Klinkhamer, F.R. **107**, 235
- Determination of Physical Parameters in the Radio Source 5C 4.81
Roland, J. **107**, 267
- The Shape and Orientation of Clusters of Galaxies
Binggeli, B. **107**, 338

- Accurate Positions and Standard D_{25} Diameters for Galaxies in the Central Part of the Coma Cluster (*Text in French*)
Paturel, G., Perie, M., Rousseau, M. **107**, 413; **47**, 467
- A Complete Sample of Virgo Cluster Galaxies
Kraan-Korteweg, R.C. **107**, 414; **47**, 505
- A Westerbork Survey of Clusters of Galaxies. XIV. Abell 779 and Abell 1314
Wilson, A.S., Vallée, J.P. **107**, 416; **47**, 601
- A Table of Redshifts for Abell Clusters
Sarazin, C.L., Rood, H.J., Struble, M.F. **108**, L7
- Direct Measurement of Cluster Expansion for Nearby Galaxy Clusters
Kaastra, J.S. **109**, L5
- H I-Observations of Galaxies in the Pegasus I Cluster
Richter, O.-G., Huchtmeier, W.K. **109**, 155
- Optical Investigations of Two X-ray Clusters of Galaxies: 0430.6-6133 and 0626.7-5426
Materne, J., Chincarini, G., Tarengi, M., Hopp, U. **109**, 238
- Perturbation of the Magnitude-Redshift Relation in an Inhomogeneous Relativistic Model: The Redshift Equations
Nottale, L. **110**, 9
- Global Properties of Sa-galaxies from H I-observations
Huchtmeier, W.K. **110**, 121
- The Phase-space Distribution Function of Galaxies in Clusters and the Secondary Peak
Trevese, D., Vignato, A. **110**, 238
- Gas Dynamics of Flow Past Galaxies
Shaviv, G., Salpeter E.E. **110**, 300
- Radio and X-ray Observations of the Abell 2241 Galaxy Clusters
Bijleveld, W., Valentijn, E.A. **111**, 50
- Galaxy Groups: Sample-dependence of Virial Properties
Mardirossian, F., Mezzetti, M., Giuricin, G. **111**, 86
- A Search for Radio Halo Emission at 430 MHz in 72 Rich Clusters of Galaxies
Hanisch, R.J. **111**, 97
- The Hydra I Cluster of Galaxies. A Unique Case of Membership Definition
Richter, O.-G., Materne, J., Huchtmeier, W.K. **111**, 193
- Radio and X-ray Galaxies in Abell 566
Harris, D.E., Robertson, J.G., Dewdney, P.E., Costain, C.H. **111**, 299
- New UVB Parameters for 46 E-SO Galaxies in the Virgo Cluster
Michard, R. **112**, 180; **49**, 591
- Further Investigations on Possible Correlations Between QSOs and the Lick Catalogue of Galaxies
Nieto, J.-L., Seldner, M. **112**, 321
- The South West Extension of the Perseus Supercluster
Focardi, P., Marano, B., Vettolani, G. **113**, 15
- Dynamics of the Galaxy Clusters Coma and Hydra I
Fuchs, B., Materne, J. **113**, 85
- Evolution of Rich Clusters of Galaxies
Roos, N., Aarseth, S.J. **114**, 41
- Perturbation of the Magnitude - Redshift Relation in an Inhomogeneous Relativistic Model. II. Correction to the Hubble Law Behind Clusters
Nottale, L. **114**, 261
- How Well is Gas Mixed in Clusters of Galaxies?
Nepveu, M. **114**, 337
- Galactic Neutrino Models
Rephaeli, Y. **114**, 405
- Common Properties of Clusters of Galaxies Containing Radio Halos and Implications for Models of Radio Halo Formation
Hanisch, R.J. **116**, 137
- Bias in observed nearby clusters of galaxies
Capelato, H.V., Dominguez-Tenreiro, R., Mazure, A., Salvador-Solé, E. **117**, 17
- Holes in cosmology
Occhionero, F., Santangelo, P., Vittorio, N. **117**, 365
- The orientation in space of spiral galaxies in the Local Supercluster
Kapranidis, S., Sullivan III, W.T. **118**, 33
- Perturbation of the magnitude-redshift relation in an inhomogeneous relativistic model. III. Redshift effect intrinsic to clusters of galaxies
Nottale, L. **118**, 85
- On semi-degenerate equilibrium configurations of a collisionless self-gravitating Fermi gas
Ruffini, R., Stella, L. **119**, 35
- WSRT radio observations at 1.4 GHz of 32 Abell clusters of distance class 3 and 4
Fanti, C., Fanti, R., Feretti, L., Gioia, I.M., Giovannini, G., Gregorini, L., Padrielli, L., Parma, P., Tomasi, P., Marano, B. **119**, 163; **51**, 179
- 408 MHz Observations of clusters of galaxies. II. The Coma and Perseus superclusters
Ballarati, B., Feretti, L., Gavazzi, G., Giovannini, G., Nanni, M. **119**, 165; **51**, 321
- The geometry of two superclusters Coma-A1367 and Perseus-Pisces
Chincarini, G.L., Giovanelli, R., Haynes, M.P. **121**, 5
- A Westerbork map of the core of the Virgo cluster
Kotanyi, C.G., Ekers, R.D. **122**, 267
- Distance and model dependence of observational galaxy cluster concepts
Segal, I.E. **123**, 151
- WRST radio observations at 1.4 GHz of 22 Abell clusters of distance class 5
Fanti, C., Fanti, R., Feretti, L., Gioia, I.M., Giovannini, G., Gregorini, L., Marano, B., Padrielli, L., Parma, P., Tomasi, P. **123**, 359; **52**, 411
- The cluster of galaxies SC 0316-44. Does it rotate?
Materne, J., Hopp, U. **124**, L13
- A search for microwave background diminution towards the cluster 0016+16
Andernach, H., Schallwisch, D., Sholomitski, G.B., Wielebinski, R. **124**, 326
- Are galaxy properties specific for their parent clusters?
Kraan-Korteweg, R.C. **125**, 109
- The cluster around 3 C 130
Jägers, W.J. **125**, 172
- The Hydra I cluster of galaxies. II. First results from H I-observations
Richter, O.-G., Huchtmeier, W.K. **125**, 187
- The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. I. New Westerbork observations of 22 cD galaxies and Einstein observations of A 1918 and A 2317
Bijleveld, W., Valentijn, E.A. **125**, 217
- ESO 438-G 9: a Seyfert galaxy with unusual properties
Kollatschny, W., Fricke, K.J. **125**, 276
- A class of self-similar astrophysical explosions
Nepveu, M. **125**, 375
- The growth of asphericity in cosmology
Santangelo, P., Occhionero, F., Carnevali, P. **126**, 403

Clusters, open (or galactic)

H α and OI Photometry of the Pleiades

Mendoza, E.V. **71**, 147

A Catalogue of Galactic Clusters Observed in Three Colours

Fenkart, R.P., Binggeli, B. **72**, 378; **35**, 271

Photometry of Loose Clusterings in the Southern Milky Way

Lodén, L.O. **73**, 366; **36**, 83

A Compilation of Transit Tables for Star Numbering in Open Clusters (Magnetic Tape)

Mermilliod, J.-C. **73**, 366; **36**, 163

Erratum: Photometry of Loose Clusterings in the Southern Milky Way

Lodén, L.O. **73**, 366; **36**, 485

Internal Motions in the Central Field of the Pleiades

Vasilevskis, S., van Leeuwen, F., Nicholson, W., Murray, C.A. **76**, 257; **37**, 333

Analysis of the Results of MK Classification of 176 Stars in 37 Southern Open Clusters

Fitzgerald, M.P., Luiken, M., Maitzen, H.M., Moffat, A.F.J. **76**, 257; **37**, 345

The Open Clusters Pismis 6 and 8, and Wat 6

Fitzgerald, M.P., Boudreault, R., Fich, M., Luiken, M., Witt, A.N. **76**, 257; **37**, 351

On the Eclipsing Binaries of the Ursa Major Stream

Giannuzzi, M.A. **77**, 214

Luminosity Distribution and Shape of the Hyades Cluster

Oort, J.H. **78**, 312

Continued Studies of Loose Clusterings in the Southern Milky Way

Lodén, L.O. **80**, 330; **38**, 355

The Chemical Abundance Gradient in the Galaxy Derived from an Analysis of the H-R Diagrams of Open Clusters

Panagia, N., Tosi, M. **81**, 375

Photometric Study of the Southern Open Cluster NGC 3532

Fernandez, J.A., Salgado, C.W. **81**, 387; **39**, 11

Balmer-line Photometry of NGC 4755

Knoechel, G. **82**, 253

Der galaktische Sternhaufen Markarjan 38

Grubisich, C., Becker, W. **86**, 269; **40**, 367

RGU Photometry of the Young Open Cluster NGC 957

Giménez, A., García-Pelayo, J. **87**, 252; **41**, 9

Colour Excess and Stellar Distribution in Five Selected Directions of the Milky Way in Carina, Crux, Centaurus and Norma

Johansson, K.L.V. **87**, 253; **41**, 43

Studies of the Carina Nebula: IV. A New Determination of the Distances of the Open Clusters Tr 14, Tr 15, Tr 16 and Cr 228 Based on Walraven Photometry

Thé, P.S., Bakker, R., Antalova, A. **87**, 254; **41**, 93

Membership in the Open Cluster NGC 6494. Astrometry with a PDS Microdensitometer

Sanders, W.L., Schröder, R. **88**, 102

Concluding Observations of Loose Stellar Clusterings in the Southern Milky Way

Lodén, L.O. **88**, 282; **41**, 173

Photoelectric UBV Observations of the Open Cluster Berkeley 11

Jackson, P.D., Fitzgerald, M.P., Moffat, A.F.J. **88**, 283; **41**, 211

Relative Radialgeschwindigkeiten aus Objektivprismenspektren im Bereich von 9 südlichen offenen Sternhaufen und einem Sternfeld bei η Carinae

Gieseke, F. **88**, 284; **41**, 245

The Sun among the Stars. II. Solar Color, Hyades Metal Content and Distance

Hardorp, J. **88**, 334

Galactic Distribution of the Oldest Open Clusters

van den Bergh, S., McClure, R.D. **88**, 360

Studies of the Carina Nebula. II. The Extinction Law in the Direction of 14 O-type Stars

Thé, P.S., Bakker, R., Tjin A Djie, H.R.E. **89**, 209

RGU Photographic Photometry of the Open Cluster NGC 2194

del Rio, G. **91**, 380; **42**, 189

The Extent of Mixing in Stellar Interiors: Evolutionary Models and Tests Based on the HR Diagrams of 34 Open Clusters

Maeder, A., Mermilliod, J.C. **93**, 136

A Photoelectric Investigation of Ap-Stars in Open Clusters. I. NGC 2516 and NGC 1662

Maitzen, H.M., Hensberge, H. **96**, 151

Galactic Metal Abundance Gradient in Young Stellar Population

Panagia, N., Tosi, M. **96**, 306

Comparative Studies of Young Open Clusters. III. Empirical Isochronous Curves and the Zero Age Main Sequence

Mermilliod, J.C. **97**, 235

Binaries in Open Clusters. II. Discrimination Between Double and Rotating Stars

Trimble, V.L., Ostriker, J.P. **97**, 403

A Proper Motion Membership Analysis of the Open Cluster NGC 7789

McNamara, B.J., Solomon, S. **97**, 415; **43**, 337

A Study of Some Stars in the Region of the Open Cluster NGC 3532 and the Regions of Five Lodén Cluster Candidates in the Southern Milky Way

Johansson, K.L.V. **97**, 417; **43**, 421

On the Structure and Typical Age of Certain Loose Clusterings in the Milky Way

Lodén, L.O. **98**, 71

Luminous Late-type Stars in Reflection Nebulae and/or in Very Young Stellar Clusters

Gahm, G.F., Hultqvist, L., Liseau, R. **98**, 341

Spectroscopic Identification of White Dwarfs in Galactic Clusters. I. NGC 2287 and NGC 2422

Koester, D., Reimers, D. **99**, 18

Kinematical Studies of Open Clusters and OB-associations from Relative Radial Velocity Observations. I. The Open Cluster NGC 3532

Gieseke, F. **99**, 155

A Study of a Small Cluster Candidate in Norma

Johansson, K.L.V. **99**, 205; **44**, 127

A Photometric Study of Two Stellar Clusterings in the Southern Milky Way (and a General Consideration on Previous and Present Data Concerning Galactic Clusterings)

Lodén, L.O. **99**, 205; **44**, 155

The Distance Modulus of the Hyades, Coma Berenices and Praesepe Clusters

Hauck, B. **99**, 207

Chemical Composition in M 67 from Detailed Analyses

Foy, R., Proust, D. **99**, 221

A Photoelectric Investigation of Ap-stars in Open Clusters II. NGC 6475

Maitzen, H.M., Floquet, M. **100**, 3

Comparative Studies of Young Open Clusters II. An Atlas of Composite Colour-Magnitude Diagrams

Mermilliod, J.C. **100**, 334; **44**, 467

- Photographic Photometry of the Open Clusters NGC 2910, NGC 2925, Ru 79 and Ru 82 in Vela II and NGC 6031 in Norma II
Topaktas, L. **101**, 419; **45**, 111
- Erratum: Binaries in Open Clusters. II. Discrimination Between Double and Rotating Stars
Trimble, V.L., Ostriker, J.P. **102**, 142
- UBV and H_β Observations of Stars towards M 8
Chini, R., Neckel, Th. **102**, 171
- Geneva Photometric Boxes. III. Distances and Reddenings for 43 Open Clusters
Nicolet, B. **104**, 185
- The Sun Among the Stars. V. A Second Search for Solar Spectral Analogs. The Hyades' Distance
Hardorp, J. **105**, 120
- Spectroscopic Orbits for Three Double-lined Binaries in the Hyades Field, 22° 669, vA 771, and vB 166
Griffin, R.F., Mayor, M., Gunn, J.E. **106**, 221
- Membership, Basic Parameters and Luminosity Function of the Southern Open Cluster NGC 2547
Clarià, J.J. **106**, 380; **47**, 323
- On the Distance to the Giant Galactic H II Region NGC 3603
Melnick, J., Grosbøl, P. **107**, 23
- Mass Loss Rates in the Open Cluster IC 1805
Llorente de Andrés, F., Burki, G., Ruiz del Arbol, J.A. **107**, 43
- UV and Visible Photometry of the Brightest Pleiades Stars
Golay, M., Mauron, N. **107**, 415; **47**, 547
- Semiconvection in Low-mass Main Sequence Stars
Crowe, R.A., Mitalas, R. **108**, 55
- Comparisons of the HR Diagrams of the Youngest Clusters in the Galaxy, the LMC and SMC. Evidence for a Large MS Widening
Meylan, G., Maeder, A. **108**, 148
- Stellar Content of Young Open Clusters. I. Blue Stragglers
Mermilliod, J.-C. **109**, 37
- Stellar Content of Young Open Clusters. II. Be Stars
Mermilliod, J.-C. **109**, 48
- Open Clusters in Our Galaxy
Lynga, G. **109**, 213
- The Initial Mass Function for Young Open Clusters
Tarrab, I. **109**, 285
- On the Radial Colour Variation in Nine Young Populous Clusters in the LMC
Meylan, G. **110**, 348
- Photographic RGU Photometry of Five Southern Open Clusters in Vela II
Topaktas, L., Fenkart, R.P. **112**, 178; **49**, 475
- Integrated Colors of Young Open Clusters as a Function of Age
Tarrab, I. **113**, 57
- Electronographic Photometry in the Galactic Cluster M 37
Robin, A. **115**, 218; **50**, 251
- A Photoelectric Investigation of Ap-stars in Open Clusters. III. NGC 2362, NGC 2546, and NGC 3228
Maitzen, H.M. **115**, 275
- Spectroscopic Identification of White Dwarfs in Galactic Clusters. II. NGC 2516
Reimers, D., Koester, D. **116**, 341
- Kinematical studies of open clusters and OB-associations from relative radial velocity observations. II. The Orion Belt region
Gieseking, F. **118**, 102
- A virial mass determination of the open cluster NGC 6494
McNamara, B.J., Sanders, W.L. **118**, 361
- Photometric membership in the very young open clusters NGC 457, NGC 7380, and IC 1805
Baade, D. **119**, 164; **51**, 235
- Detection of a late B star companion of the bright cluster giant c Pup = HD 63032
Groote, D., Reimers, D. **119**, 319
- On the variability of the two brightest stars in the galactic cluster IC 2391
Waelkens, C., Rufener, F. **121**, 162; **52**, 21
- An investigation of the heavily reddened young open cluster Tr 27 on the Walraven photometric system
Bakker, R., Thé, P.S. **121**, 162; **52**, 27
- Observed radii and structural parameters of clusters in the SMC. II
Kontizas, E., Kontizas, M. **121**, 164; **52**, 143
- The absolute masses of 72 galactic clusters and 12 OB associations
Bruch, A., Sanders, W.L. **121**, 237
- Evidence of high chromospheric activity in Hyades dwarfs from spectroscopic observations
Cayrel, R., Cayrel de Strobel, G., Campbell, B., Mein, N., Mein, P., Dumont, S. **123**, 89
- Theoretical evolution of massive stellar aggregates
Vanbeveren, D. **124**, 71
- A physical study of the Ursa Major cluster (with special attention to the peculiar A stars)
Lodén, L.O. **124**, 152; **53**, 33
- The bright stellar content of the giant galactic H II region NGC 3603
Moffat, A.F.J. **124**, 273
- R 136: supermassive star or dense core of a star cluster?
Moffat, A.F.J., Seggewiss, W. **125**, 83
- Positions of stars in regions of 14 southern galactic clusters
Andersen, T.B., Reiz, A. **125**, 175; **53**, 181
- Stellar content of young open clusters. III. The "sn" stars
Mermilliod, J.-C. **128**, 362
- Coalsack**
- Photographic Surface Photometry of the Milky Way. II. Surface Photometry in the Region of the Dark Cloud "Coalsack" in U, B, V, R (in German)
Seidensticker, K.J., Schmidt-Kaler, T., Schlosser, W. **114**, 60
- Cocoon Stars**, see Protostars
- Collapse**
- A Magnetohydrodynamical Supernova Model
Müller, E., Hillebrandt, W. **80**, 147
- Stellar Collapse: Adiabatic Hydrodynamics and Shock Wave Propagation
Müller, E., Rózycka, M., Hillebrandt, W. **81**, 288
- Some Limits on Excitation Energies of Nuclei in Hot Matter
Mazurek, T.J., Brown, G.E. **81**, 382
- Electron Capture and Stellar Core Implosion
Chung, K.C., Kodama, T. **93**, 309
- Computer Simulations of Stellar Collapse and Shock Wave Propagation
Hillebrandt, W., Müller, E. **103**, 147
- The Collapse of Rotating Stellar Cores
Müller, E., Hillebrandt, W. **103**, 358
- Mean-field Calculations of the Equation of State of Supernova Matter II
Bonche, P., Vautherin, D. **112**, 268
- Gravitational collapse and fragmentation of isothermal, non-rotating, cylindrical clouds
Bastien, P. **119**, 109

Collisions, see Atomic Data, Line Broadening

Electron Collisional Excitation of Rotational Transitions in CH^+ and HeH^+

Flower, D.R. **73**, 237

Direct Excitation of Hydrogen by Photoelectron and Accelerated Electron Collisions in Solar Chromospheric Flares: Effects on the Profile and Polarization of Ly α

Chambe, G., Hénoux, J.-C. **80**, 123

Stellar Ion-induced Coulomb Enhancements of Nuclear Radiative Decay Rates

Ward, R.A. **97**, 157

Thermal Overlap Effects and Collision Models: HCN

Guilloteau, S., Baudry, A. **97**, 213

Classical Rigid-ellipsoid model for Collisions of H_2 with HC_7N and HC_9N

Bhattacharyya, S.S., Dickinson, A.S. **107**, 26

The Collision Strength for the $\text{N III } \lambda$ 1750 Transition

Nussbaumer, H., Storey, P.J. **109**, 271

Pumping of H II/OH Masers: IR Line Overlaps and Collisional Excitation by H_2

Flower, D.R., Guilloteau, S. **114**, 238

Color Magnitude Diagram, see under the different Objects

Note on Photometric Properties of Red Dwarfs in the Cousins VRI System

Thé, P.S., Karman, C., Alcaino, G. **103**, 209; **46**, 105

Colors, see also under the different Objects

The Colours of G and K Type Giant Stars. I

Gustafsson, B., Bell, R.A. **74**, 313

High Luminosity Stars. I. *UBV* Intrinsic Colors

Dubois, P. **79**, 143

Uniform Transformations and Extinction Variations for the *UBV* System

Haug, U. **84**, 23

Intrinsic Colours of MK Types in the Geneva Photometric System

Meylan, G., Python, M., Hauck, B. **90**, 83

The Colours, Magnitudes and Parallaxes of the Nearby Stars

Grenon, M., Rufener, F. **103**, 208; **46**, 25

Note on Photometric Properties of Red Dwarfs in the Cousins VRI System

Thé, P.S., Karman, C., Alcaino, G. **103**, 209; **46**, 105

Geneva [*U*, *B*, *V*] Intrinsic Colours of B-type Stars

Cramer, N. **112**, 330

Comets

Comet West 1975 n. Part I. Observations Near and After Perihelion Passage

Koutchmy, S., Coupiac, P., Elmore, D., Lamy, P., Sèvre, F. **72**, 45

Comet West 1975 n. Part II. Study of the Striated Tail

Lamy, P.L., Koutchmy, S. **72**, 50

The Ultraviolet Spectrum of Comet Seargent 1978 m

Jackson, W.M., Rahe, J., Donn, B.D., Smith, A.M., Keller, H.U., Benvenuti, P., Delsemme, A.H., Owen, T. **73**, L7

Reduction of Observations of the Comet P/Ashbrook-Jackson at ESO La Silla by Means of GPO ($F=400$ cm, $D=40$ cm) in April 1978

Debehogne, H., Machado, L.E. **76**, 368; **37**, 467

On the L_α Isophotes of Comet West (1976 VI)

Keller, H.U., Meier, R.R. **81**, 210

On the Acceleration of Cometary Plasma

Ip, W.-H. **81**, 260

New Monte Carlo Simulations of the Orbital Evolution of Short-period Comets and Comparison with Observations

Froeschlé, C., Rickman, H. **82**, 183

Libration of Comet P/Boethin around the 1/1 Resonance with Jupiter

Benest, D., Bien, R., Rickman, H. **84**, L11

On Exact Solutions of Diffusion Equation in Cometary Dynamics

Yabushita, S. **85**, 77

Physical Loss of Long-period Comets

Weissman, P.R. **85**, 191

Positions de la comète Meier (1978f) obtenues en avril 1979, au grand prisme objectif, GPO ($f=4$ m, $d=40$ cm), de l'observatoire ESO à La Silla

Debehogne, H., Machado, L.E., Caldeira, J.F., Vieira, G.G., Netto, E.R. **85**, 266; **40**, 251

Spectroscopic and Photographic Observations of Comet Bradfield (1979 I)

Cosmovici, C.B., Ortolani, S. **88**, L16

Cometary Atmospheres. I. Solar Wind Modification of the Outer Ion Coma

Ip, W.-H. **92**, 95

A Comet Fragment Model for Zodiacal Light Particles

Greenberg, J.M., Gustafson, B.A.S. **93**, 35

The Influence of the Radiation Transfer in Cometary Dust Halos on the Production Rates of Gas and Dust

Hellmich, R. **93**, 341

Temporary Satellite Captures of Comets by Jupiter

Carusi, A., Valsecchi, G.B. **94**, 226

The Density Distribution of Neutral Compounds in Cometary Atmospheres. I. Models and Equations

Festou, M.C. **95**, 69

New and Evolved Comets in the Solar System

Fernández, J.A. **96**, 26

The Density Distribution of Neutral Compounds in Cometary Atmospheres. II. Production Rate and Lifetime of OH Radicals in Comet Kobayashi-Berger-Milon (1975 IX)

Festou, M.C. **96**, 52

Intensities of Various Bands of the Molecules CN, CN^+ , and CS in Comets

Krishna Swamy, K.S. **97**, 110

A Search for the λ 1.35-cm Line of H_2O in Comets Kohler (1977 XIV) and Meier (1978 XXI)

Crovisier, J., Despois, D., Gérard, E., Irvine, W.M., Kazès, I., Robinson, S.E., Schloerb, F.P. **97**, 195

Perturbation of Parabolic Comets by a Transient Solar Companion

Wilkins, D. **98**, 30

On the Outgassing and Jet Thrust of Snowball Comets

Wallis, M.K., Mucpherson, A.K. **98**, 45

Erratum: A Comet Fragment Model for Zodiacal Light Particles

Greenberg, J.M., Gustafson, B.A.S. **98**, 422

Perturbations by Jupiter of a Chain of Objects Moving in the Orbit of Comet Oterma

Carusi, A., Kresák, L., Valsecchi, G.B. **99**, 262

The OH Radical in Comets: Observation and Analysis of the Hypertfine Microwave Transitions at 1667 MHz and 1665 MHz

Despois, D., Gérard, E., Crovisier, J., Kazès, I. **99**, 320

Variations of the Orbit of Comet P/Gehrels 3: Temporary Satellite Captures by Jupiter

Rickman, H., Malmort, A.M. **102**, 165

The Forbidden Oxygen Lines in Comets

Festou, M.C., Feldman, P.D. **103**, 154

- On the Definition of Albedo and Application to Irregular Particles
Hanner, M.S., Giese, R.H., Weiss, K., Zerull, R. **104**, 42
- Note sur le spectre de la Comète 1980 u
Huang Chang-Chun **106**, 179; **46**, 369
- On the Brightness of Halley's Comet
Ferrin, I. **107**, L7
- Production of CS and S in Comet Bradfield (1979 X)
Jackson, W.M., Halpern, J.B., Feldman, P.D., Rahe, J. **107**, 385
- Halley's Comet: Energy and Perturbations
Buffoni, L., Manara, A., Scardia, M. **108**, 141
- A Model of a Comet Coma with Interstellar Molecules in the Nucleus
Biermann, L., Giguere, P.T., Huebner, W.F. **108**, 221
- Tentative Identification of CS⁺ in Comets
Singh, P.D. **108**, 369
- Evaluation of Infrared Line Emission from Constituent Molecules of Cometary Nuclei
Yamamoto, T. **109**, 326
- Method for Constructing Periodic Orbits (Text in French)
Edelman, C. **111**, 220
- The Effect of Star Passages on Cometary Orbits in the Oort Cloud
Scholl, H., Cazenave, A., Brahic, A. **112**, 157
- Deep Sounding with Electronograph Camera at the Prime Focus of the CFHT: Upper Limit to the Visual Brightness of Comet P/Halley During the 1981/1982 Opposition
Felenbok, P., Picat, J.P., Chevillat, A., Guérin, J., Combes, M., Gerard, E., Lecacheux, J., Lelièvre, G. **113**, L1
- NH⁺ - A Candidate for Comets and Interstellar Space
de Almeida, A.A., Singh, P.D. **113**, 199
- Dynamic Coma Models for Comet Bennet 1970 II
Cucchiaro, A., Malaise, D. **114**, 102
- Improved Orbital Elements for Periodic Comet Schorr (1918 III)
de Veit, C., Kohoutek, L., Marsden, B.G. **114**, 147
- On the Spectrum of Comet Bradfield 1980 I
Cosmovici, C.B., Barbieri, C., Bonoli, C., Bortoletto, F., Hamzaoglu, E. **114**, 373
- Perturbations by Jupiter of the Particles Ejected from Comet Lexell
Carusi, A., Kresáková, M., Valsecchi, G.B. **116**, 201
- The mass of the Oort cloud
Weissman, P.R. **118**, 90
- H₂ production in comets
Pirronello, V., Strazzulla, G., Foti, G. **118**, 341
- Studies of small asteroids. III. Positions of asteroids obtained during September 1978 with the ESO Schmidt telescope
Lagerkvist, C.-I., Carlsson, I.-M. **119**, 166; **51**, 341
- Astrometry and photometry of comet P/Halley in October and November 1982
Sicardy, B., Guérin, J., Lecacheux, J., Baudrand, J., Combes, M., Picat, J.P., Lelièvre, G., Lemonnier, J.P. **121**, L4
- Electrodynamics of submicron dust in the cometary coma
Wallis, M.K., Hassan, M.H.A. **121**, 10
- P/Halley: first signs of activity?
West, R.M., Pedersen, H. **121**, L11
- The chemical composition and thermal history of the ice of a cometary nucleus
Yamamoto, T., Nakagawa, N., Fukui, Y. **122**, 171
- Interpretation of the event in the plasma tail of comet Bradfield 1979 X on 1980 February 6
Le Borgne, J.F. **123**, 25
- Infrared and microwave fluorescence of carbon monoxide in comets
Crovisier, J., Le Bourlot, J. **123**, 61
- Physical and chemical effects induced by energetic ions on comets
Strazzulla, G., Pirronello, V., Foti, G. **123**, 93
- Charged particle erosion of frozen volatiles in ice grains and comets
Johnson, R.E., Lanzerotti, L.J., Brown, W.L., Augustyniak, W.M., Mussil, C. **123**, 343
- Radio observations of Comet 1983 d
Altenhoff, W.J., Batrla, W., Huchtmeier, W.K., Schmidt, J., Stumpff, P., Walmsley, M. **125**, L19
- Infrared fluorescence of molecules in comets: the general synthetic spectrum
Crovisier, J., Encrenaz, Th. **126**, 170
- Determination of nongravitational parameters for some periodic comets
Forti, G. **126**, 307
- Branching ratios in the vacuum ultraviolet spectrum of neutral carbon
Tozzi, G.P., Huber, M.C.E., Pauls, U. **126**, 320
- Excitation of C II lines by photoionization of neutral carbon
Hofmann, H., Saha, H.P., Trefftz, E. **126**, 415
- Evolution and decay of the peculiar meteor stream associated with Comet Lexell
Carusi, A., Kresáková, M., Valsecchi, G.B. **127**, 373
- Compact Galaxies**, see also Galaxies, Quasi Stellar Objects, Seyfert Galaxies
- A Spectroscopic Survey of the Blue Compact Zwicky Galaxies
Kunth, D., Sargent, W.L.W. **73**, 369; **36**, 259
- Structural Changes in the Nucleus of NGC 1275 at 2.8 cm Wavelength
Preuss, E., Kellermann, K.I., Pauliny-Toth, I.I.K., Witzel, A., Shaffer, D.B. **79**, 268
- Chemical Composition and Evolution of Irregular and Blue Compact Galaxies
Lequeux, J., Peimbert, M., Rayo, J.F., Serrano, A., Torres-Peimbert, S. **80**, 155
- H I Observations and Star Formation in the Blue Compact Galaxy IZw 18
Lequeux, J., Viallefond, F. **91**, 269
- A Spectroscopic Survey of Emission-line Objects in Two Fields
Kunth, D., Sargent, W.L.W., Kowal, C. **99**, 403; **44**, 229
- A New Bright Compact Galaxy in Ursa Major
Barbieri, C., Cristiani, S., Romano, G. **105**, 369
- The Physical Nature of the Blue Objects in the Field of 88 Leonis
Erculiani Abati, L. **110**, 180; **48**, 333
- Compact Objects**, see also Compact Galaxies
- High Resolution Observations of the Compact Central Component in the Giant Radio Source 3C 236
Schilizzi, R.T., Miley, G.K., van Ardenne, A., Baud, B., Baath, L., Rönnäng, B.O., Pauliny-Toth, I.I.K. **77**, 1
- V LBI Observations of Compact Components in Extended Radio Sources
Kapahi, V.K., Schilizzi, R.T. **77**, 371; **38**, 11
- The Variable, Single-line Wolf-Rayet Star HD 96548 with a Low-mass Companion
Moffat, A.F.J., Isserstedt, J. **91**, 147
- The Variable, Single-line WN8 Star HD 86161: Another Wolf-Rayet Star with a Low-mass Companion
Moffat, A.F.J., Niemela, V.S. **108**, 326
- Composite Spectra**, see Spectroscopic Binaries
- Compton Scattering**, see Scattering

- Contact Binaries**, see Close Binaries, W Ursae Majoris Stars
- Evolution of W UMa Systems and Angular Momentum Loss
Rahunen, T. **102**, 81
- On the Evolutionary State of the W Ursae Majoris Contact Binaries
Van Hamme, W. **105**, 389
- On the Stability and Evolution of Contact Binaries. I
Rahunen, T. **109**, 66
- On the Stability of Age-zero Contact Binaries. II
Hazlehurst, J., Höppner, W., Refsdal, S. **109**, 117
- Planetary Nebulae with Close Binary Nuclei-corrections to Angular Momentum Loss
Salzman, J., Livio, M., Shaviv, G. **109**, 201
- The Interacting Early-type Contact Binary SV Centauri
Drechsel, H., Rahe, J., Wargau, W., Wolf, B. **110**, 246
- Contact Binaries: Angular Momentum Loss In and Out of Contact
Rucinski, S.M. **112**, 273
- BR Muscae: A New Early-type Contact Binary
Clariá, J.J., Lapasset, E. **114**, 419; **50**, 13
- Estimated Absolute Dimensions and the Inferred Lifetime and Angular Momentum of W Ursae Majoris Contact Binaries
Van Hamme, W. **116**, 27
- On the stability and evolution of contact binaries. II
Rahunen, T. **117**, 235
- Photometric observations and elements of the eclipsing binary TT Herculis
Kwee, K.K., van Genderen, A.M. **126**, 94
- Convection**, see also Turbulence
- On the Efficiency of Convection and the Possibility of Mixing at the Helium Core Flash
Scalo, J.M. **74**, 6
- Solar Models, Helium Content and Mixing Length
Mazzitelli, L. **79**, 251
- Stochastic Stellar Evolution. II. Fluctuations Due to Convection
Bertelli, G., Chiosi, C., Perdang, P. **79**, 261
- On Local Theories of Time-dependent Convection in the Stellar Pulsation Problem
Gonczi, G., Osaki, Y. **84**, 304
- Cellular Convection in a Stratified Atmosphere
Massaguer, J.M., Zahn, J.-P. **87**, 315
- Differential Rotation Along the Lower Main Sequence: A Theoretical Investigation
Belvedere, G., Paternò, L., Stix, M. **88**, 240
- The Solar Granulation: I. Two dimensional Power-spectrum Analysis Using Optical Data Processing Methods
Koutchmy, S., Legait, A. **88**, 345
- Buoyancy Effects in Spherical Accretion
Garlick, A.R. **89**, 48
- Two Basis Sets for the g - and p -modes of Self Gravitating Fluids
Dixit, V.V., Sarath, B., Sobouti, Y. **89**, 259
- The Time Scale of Thermohaline Mixing in Stars
Kippenhahn, R., Ruschenplatt, G., Thomas, H.-C. **91**, 175
- A "Fast" Model of the Solar Convection Zone
Belvedere, G., Paternò, L., Roxburgh, I.W. **91**, 356
- The Extent of Mixing in Stellar Interiors: Evolutionary Models and Tests Based on the HR Diagrams of 34 Open Clusters
Maeder, A., Mermillod, J.C. **93**, 136
- Screening Effects in the Solar Convection Zone
Stix, M. **93**, 339
- On Local Theories of Time Dependent Convection in the Stellar Pulsation Problem. II. The Effect of Turbulent Viscosity
Gonczi, G. **96**, 138
- Solar Granulation: Influence on Convection of Spectral Line Asymmetries and Wavelength Shifts
Dravins, D., Lindegren, L., Nordlund, Å. **96**, 345
- Motion of Magnetic Flux Tubes in the Solar Convection Zone and Chromosphere
Spruit, H.C. **98**, 155
- The Solar Structure and the Five-minute Oscillation
Scuflaire, R., Gabriel, M., Noels, A. **99**, 39
- On the Importance of Convective Transport of Excited Atoms in Stellar Atmospheres
Hubeny, I. **100**, 314
- Mass Loss and Overshooting in Massive Stars
Bressan, A.G., Bertelli, G., Chiosi, C. **102**, 25
- An Upper Limit for the Deuterium Abundance in Canopus
Peimbert, M., Wallerstein, G., Pilachowsky, C.A. **104**, 72
- Numerical Simulations of the Solar Granulation. I. Basic Equations and Methods
Nordlund, Å. **107**, 1
- Overshooting from Convective Cores and the Occurrence of Loops in the HR Diagram
Matraka, B., Wassermann, C., Weigert, A. **107**, 283
- Semiconvection in Low-mass Main Sequence Stars
Crowe, R.A., Mitalas, R. **108**, 55
- Incompressible Convection in a Radiating Atmosphere. I. General Characteristics
Legait, A. **108**, 287
- On Local Theories of Time-dependent Convection in the Stellar Pulsation Problem. III. The Effect of Turbulent Viscosity (Continued)
Gonczi, G. **110**, 1
- On the Magnitude and the Height Dependence of the Granular Vertical Flow Velocity
Bässgen, M., Deubner, F.-L. **111**, L1
- Vertical Structure of the Solar Photosphere II. The Small-scale Velocity Field
Durrant, C.J., Nesis, A. **111**, 272
- The Overshoot Layer at the Base of the Solar Convective Zone and the Problem of Magnetic Flux Storage
van Ballegooijen, A.A. **113**, 99
- The Combined Effect of Mass Loss and Overshooting. I. The Evolution of 35 M_{\odot} to 100 M_{\odot} Stars During Core Hydrogen Burning
Doom, C. **116**, 303
- The Combined Effect of Mass Loss and Overshooting. II. The Evolution of 10 M_{\odot} to 30 M_{\odot} Stars During Core Hydrogen Burning
Doom, C. **116**, 308
- The Asymmetry of Photospheric Absorption Lines. I. An Analysis of Mean Solar Line Profiles
Kaisig, M., Durrant, C.J. **116**, 332
- Profiles and shifts of the C I 5052-Å line in the granulation spectrum
Namba, O., Hafkenscheid, G.A.M., Koyama, S. **117**, 277
- Two comments on the Sun's differential rotation
Schmidt, W., Stix, M. **118**, 1
- Helicity and α -effect of simple convection cells
Stix, M. **118**, 363
- The influence of overshooting on the evolution of massive close binaries
Vanbeveren, D. **119**, 239

Hydrostatic reaction of the Sun to local disturbances

Däppen, W. **124**, 11

Semiconvective diffusion and energy transport

Langer, N., Sugimoto, D., Fricke, K.J. **126**, 207

Overshooting from convective cores and the occurrence of loops in the HRD. II. Evolution of 5 *M* stars to the Cepheid phase

Huang, R.Q., Weigert, A. **127**, 309

Cool Stars, see Late Type Stars

Corona, see Solar Corona, Stellar Coronae

Coronal Holes, see Solar Corona

Cosmic Rays

A Two-zone propagation Model Applied to Radioactive Cosmic Ray Isotopes

Simon, M., Scherzer, R., Enge, W. **75**, 114

The Effect of Cosmic Ray Screening upon the Stability of Interstellar Clouds

Hartquist, T.W., Oppenheimer, M., Elmegreen, B. **75**, 137

Gas, Dust, High Energy Particles and Star Formation in the Galactic Center

Audouze, J., Lequeux, J., Masnou, J.-L., Puget, J.-L. **80**, 276

On the Self-similar Solution for the Distribution Function of Particles Accelerated by Alfvén Waves

Longren, K.E., Axford, R.A. **81**, 363

Derivation of the Age Distributions of Cosmic Rays in a Galaxy with a Convective Halo

Freedman, I., Giler, M., Kearsey, S., Osborne, J.L. **82**, 110

Energy Spectrum and Propagation of Cosmic Ray Electrons

Giler, M., Wdowczyk, J., Wolfendale, A.W. **84**, 44

Particle Acceleration by Shock Waves in Solar Flares

Achterberg, A., Norman, C.A. **89**, 353

The Source Distribution of Cosmic-ray Electrons

Massaro, E., Sacco, B., Manzo, G. **90**, 140

Isotopes Anomalies in Meteorites and the Origin of the Galactic Cosmic Rays

Audouze, J., Chièze, J.-P., Vangioni-Flam, E. **91**, 49

On the Nature of Small Amplitude Fermi Acceleration

Achterberg, A. **97**, 259

On the Propagation of Relativistic Particles in a High β Plasma

Achterberg, A. **98**, 161

The Ponderomotive Force due to Cosmic Ray Generated Alfvén Waves

Achterberg, A. **98**, 195

The Relative Abundances of the Elements Scandium to Manganese in Relativistic Cosmic Rays and the Possible Radioactive Decay of Manganese 54

Koch, L., Engelmann, J.J., Goret, P., Juliusson, E., Petrou, N., Rio, Y., Soutoul, A., Byrnek, B., Lund, N., Peters, B. **102**, L9

H₂ Production in Dense Molecular Clouds

Pirronello, V., Strazzulla, G., Foti, G. **103**, L5

Contribution of Cosmic Ray-irradiated Molecular Clouds to the Number of Apparent γ -ray Sources

Li Ti Pei, Wolfendale, A.W. **103**, 19

Ammonia in the Neighbourhood of the Galactic Center

Güsten, R., Walmsley, C.M., Pauls, T. **103**, 197

Large-scale Distribution of Galactic Gamma Radiation Observed by COS-B

Mayer-Hasselwander, H.A., Bennett, K., Bignami, G.F., Buccheri, R., Caraveo, P.A., Hermsen, W., Kanbach, G., Lebrun, F., Lichti, G.G., Masnou, J.L. **105**, 164

High Energy Gamma Rays from Cosmic Ray Nucleons

Schlickeiser, R. **106**, L5

On the Transport and Propagation of Relativistic Electrons in Galaxies. The Effect of Adiabatic Deceleration in a Galactic Wind for the Steady State Case

Lerche, I., Schlickeiser, R. **107**, 148

Determination of Physical Parameters in the Radio Source 5C 4.81

Roland, J. **107**, 267

Preinjection of Cosmic Rays and Magnetic Chemically Peculiar Stars

Havnes, O. **110**, 203

Supernova Remnants and Bell's Acceleration Mechanism

Cavallo, G. **111**, 368

The Local Interstellar Medium as Traced by Gamma Rays

Strong, A.W., Bignami, G.F., Bloemen, J.B.G.M., Buccheri, R., Caraveo, P.A., Hermsen, W., Kanbach, G., Lebrun, F., Mayer-Hasselwander, H.A., Paul, J.A. **115**, 404

Transport and Propagation of Cosmic Rays in Galaxies. II. The Effect of a Galactic Wind on the Mean Lifetime and Age Distribution of Non-decaying Cosmic Rays

Lerche, I., Schlickeiser, R. **116**, 10

Discrete Sources of Cosmic Gamma Rays

Li, T.P., Wolfendale, A.W. **116**, 95

High Frequency Radio Continuum Observations of Bright Spiral Galaxies

Gioia, I.M., Gregorini, L., Klein, U. **116**, 164

Radio Continuum Emission: A Tracer for Star Formation

Klein, U. **116**, 175

Non-linear Theory of Cosmic Ray Shocks Including Self-generated Alfvén Waves

McKenzie, J.F., Völk, H.J. **116**, 191

Cosmic-ray shock acceleration in the presence of self-excited waves

Lagage, P.O., Cesarsky, C.J. **118**, 223

Modification of scattering waves and its importance for shock acceleration

Achterberg, A. **119**, 274

Onion-shell model of cosmic ray acceleration in supernova remnants

Bogdan, T.J., Völk, H.J. **122**, 129

The role of non-linear Landau damping in cosmic ray shock acceleration

McKenzie, J.F., Bond, R.A.B. **123**, 111

Boundary conditions for energetic particle transport at shocks

Webb, G.M. **124**, 163

Cosmic ray acceleration in supernova blast waves

Moraal, H., Axford, W.I. **125**, 204

The maximum energy of cosmic rays accelerated by supernova shocks

Lagage, P.O., Cesarsky, C.J. **125**, 249

The structure of oblique MHD cosmic-ray shocks

Webb, G.M. **127**, 97

The extended component of the radio continuum radiation from the Cassiopeia-Perseus region

Kallas, E., Reich, W., Haslam, C.G.T. **128**, 268

Cosmogony

The Formation of Planets and Satellites from Self-similar Disks

Wesson, P.S. **76**, 200

On the Disruption of a Protoplanetary Disk Nebula by a T Tauri Like Solar Wind

Elmegreen, B.G. **80**, 77

- Mass Loss from Planetary Protoatmospheres and from the Protoplanetary Nebula
Horedt, G.P. **92**, 267
- A New 1720 MHz OH Outburst in V 1057 Cyg
Winnberg, A., Graham, D.A., Walmsley, C.M., Booth, R.S. **93**, 79
- Deuterium in the Solar System
Geiss, J., Reeves, H. **93**, 189
- On a Possible Origin of Charon
Mignard, F. **96**, L1
- Formation of Planetesimals in an Evolving Protoplanetary Disk
Coradini, A., Federico, C., Magni, G. **98**, 173
- Time-varying Newtonian Gravity. An Upper Limit for the Rate of Change of the Gravitational Constant
Lapedra, R., Palacios, J.A. **98**, 382
- Gravitational Instabilities in Satellite Disks and Formation of Regular Satellites
Coradini, A., Federico, C., Magni, G. **99**, 255
- On the Origin of the Solar-system Abundances of ^{113}In , ^{114}Sn , and ^{115}Sn
Ward, R.A., Beer, H. **103**, 189
- Analysis of the Spin Rate Distribution of Asteroids
Farinella, P., Paolicchi, P., Zappala, V. **104**, 159
- Density Scaling of the Angular Momentum Versus Mass Universal Relationship
Carrasco, L., Roth, M., Serrano, A. **106**, 89
- Mass Loss from the Protoplanetary Nebula
Horedt, G.P. **110**, 209
- The Six-day Rotation Period of 1689 Floris-Jan: A New Record Among Slowly Rotating Asteroids
Schober, H.J., Surdej, J., Harris, A.W., Young, J.W. **115**, 257
- The ^{187}Re - ^{187}Os chronology and chemical evolution of the Galaxy
Yokoi, K., Takahashi, K., Arnould, M. **117**, 65
- The mass of the Oort cloud
Weissman, P.R. **118**, 90
- Clarification of the angular momentum/mass relation ($J = pM^2$) for astronomical objects
Wesson, P.S. **119**, 313
- The chemical composition and thermal history of the ice of a cometary nucleus
Yamamoto, T., Nakagawa, N., Fukui, Y. **122**, 171
- Cosmology**, see also Hubble Constant, Redshift
- The Influence of the Age of the Universe on the Stellar Evolution with Variable G
Vaopoulos, D.A., Laskarides, P.G. **71**, L12
- Rotation and Star Formation Rate in Protogalaxies
Di Fazio, A., Occhionero, F., Vagnetti, F. **72**, 204
- Scale Invariance, Metrical Connection, and the Motions of Astronomical Bodies
Maeder, A., Bouvier, P. **73**, 82
- The Cosmological Deceleration Parameter and the Sunyaev-Zeldovich Effect
Fabbri, R., Melchiorri, F., Mencaraglia, F., Natale, V. **74**, L20
- The Coupling of Matter and Radiation in Scale Covariant Cosmology
Malin, S., Mansfield, V.N. **74**, 294
- Dirac's Cosmology: Solar Models to Test Two Hypotheses of Matter Creation
Carignan, C., Beaudet, G., Sirois, A. **75**, 291
- Quasar Number Counts and the X-ray Background
Setti, G., Woltjer, L. **76**, L1
- Visibility of Pregalactic Fluctuations and an Upper Limit on q_0
Bode, M.F., Evans, A. **78**, 78
- Quasars and Cosmology
Fliche, H.H., Souriau, J.M. **78**, 87
- Scale-covariant Stellar Dynamics
Bouvier, P., Maeder, A. **79**, 158
- Quark Era in the Primeval Universe
Alvarez, E., Hakim, R. **80**, 71
- Primordial Black Holes
Novikov, I.D., Polnarev, A.G., Starobinsky, A.A., Zeldovich, Ya.B. **80**, 104
- On the Extragalactic Nature of the Far-ultraviolet Background
Jakobsen, P. **81**, 66
- Distance Functions for Coriolis Interaction in Friedmann Universes
Lausberg, A. **82**, 1
- A New Statistical Test for Galaxy Clustering
Bonometto, S.A., Lucchin, F. **82**, 287
- Population III Stars and the Shape of the Cosmological Black Body Radiation
Puget, J.L., Heyvaerts, J. **83**, L10
- Emden Sphere Embedded in a Background
Salvador-Solé, E., Gerbal, D. **83**, 95
- Statistical Properties of Radio Sources of Intermediate Strength
Katert-Merkelijn, J., Lari, C., Padrielli, L. **84**, 269; **40**, 91
- A Sample of Very Faint Ultraviolet Excess Objects in the $13^h + 36^\circ$ Field. II. A Discussion of the Number-magnitude Relation of Optically Selected Quasars and a New Determination ...
Braccisi, A., Zitelli, V., Bönoli, F., Formigini, L. **85**, 80
- Secondary Peak in Clusters of Galaxies - A Clue to Their Formation?
Dekel, A., Shaham, J. **85**, 154
- Linear Clustering of Galaxies in Low-density Universes
Occhionero, F., Vittorio, N., Carnevali, P., Santangelo, P. **86**, 212
- The Anisotropic Microwave Background in Bianchi V Models
Schmitt, J.H.M.M. **87**, 236
- Entropy Perturbations and Cosmogonic Processes in the Hot Universe
Chernin, A.D., Zentsova, A.S. **89**, 1
- Cosmological Gravitational Waves: Their Origin and Consequences
Carr, B.J. **89**, 6
- On the Nature of the Faint (B 20) Ultraviolet Excess Objects and the Problem of the X-ray Background
Bönoli, F., Braccisi, A., Marano, B., Merighi, R., Zitelli, V. **90**, L10
- The Diffuse Gamma-ray Background in the Hoyle-Narlikar Cosmology
Canuto, V.M., Owen, J.R., Narlikar, J.V. **92**, 26
- A Deep Search for Ghost Images in the Universe
Biraud, F., Mavrides, S. **92**, 128
- Upper Limits on the Hubble Modulus Anisotropy Provided by Cosmic-microwave Background Observations
Dominguez-Tenreiro, R. **93**, 306
- Heavy Right-handed Neutrinos and the Early Universe
Klinkhamer, F.R., Branco, G., Derendinger, J.P., Hut, P., Masiéro, A. **94**, L19
- On the Growth of Primordial Black Holes
Bettwieser, E., Glatzel, W. **94**, 306
- Superclusters and Lyman α Absorption Lines in Quasars
Oort, J.H. **94**, 359

- An Analysis of the Cosmological Evolution of Radio Sources. II. Evolution Functions for Flat- and Steep-Spectrum Sources at 1400 MHz
Machalski, J. **95**, 209; **43**, 91
- A 4850 MHz Survey of the 5C 6 Area
Maslowski, J., Pauliny-Toth, I.I.K., Witzel, A., Kühr, H. **95**, 285
- Merging of Galaxies in an Expanding Universe
Roos, N. **95**, 349
- Mach's Principle in Evolutionary Universes with Time Varying Temporal Metric Coefficient
Gomide, F.M., Uehara, M. **95**, 362
- The Formation of Cavities around Cosmological Condensations
Occhionero, F., Vecchia-Scavalli, L., Vittorio, N. **97**, 169
- Constraints to the QSO Contribution to the X-ray Background
Cavaliere, A., Danese, L., de Zotti, G., Franceschini, A. **97**, 269
- Neutrino Dating of the Galaxy Formation Epoch
Berezinsky, V.S., Ozernoy, L.M. **98**, 50
- Nucleosynthesis in an Inhomogeneous Universe Filled by Whirls
Dryzhakova, O.V., Ozernoy, L.M., Pelikhov, N.V., Vainer, B.V. **98**, 57
- Time-varying Newtonian Gravity. An Upper Limit for the Rate of Change of the Gravitational Constant
Lapiedra, R., Palacios, J.A. **98**, 382
- Constraints on Leptonic Asymmetry and Cosmological Constant from Neutrino Rest Mass
Luminet, J.-P., Schneider, J. **98**, 412
- Cavities in High Density Universes
Occhionero, F., Vecchia-Scavalli, L., Vittorio, N. **99**, L12
- Further Evidence for the Strong Steepening of the Median Radio Spectrum with Decreasing Intensity of Sources Selected at 5 GHz
Machalski, J., Ryś, S. **99**, 388
- Imprints of the Damping of Adiabatic Perturbations
Dekel, A. **101**, 79
- Extragalactic Radio Sources with very Steep Decimetre-wave Spectrum
Gopal-Krishna, Steppe, H. **101**, 315
- Scale-invariant Gravity: a Simple Formulation
Wesson, P.S. **102**, 45
- On the Observability of Gravitational Scintillation
Hameury, J.M., Perault, M., Bonazzola, S., Puget, J.L. **103**, 63
- An Upper Limit for the Deuterium Abundance in Canopus
Peimbert, M., Wallerstein, G., Pilachowsky, C.A. **104**, 72
- On the Quasar Surface Density
Véron, P., Véron-Cetty, M.P. **105**, 405
- Possible Measurement of the Time Delay Between Gravitational Images of Expanding Double Radio-sources
Vanderriest, C. **106**, L1
- Baryon Number Creation and Phase Transitions in the Early Universe
Hut, P., Klinkhamer, F.R. **106**, 245
- The Periodicity in the Distribution of Quasar Redshifts and the Density Perturbations in the Early Universe
Fang, L.-Z., Chu, Y.-Q., Cao, Ch. **106**, 287
- Double Compton Process and the Spectrum of the Microwave Background
Danese, L., De Zotti, G. **107**, 39
- Perturbations of the Hubble Flow
Occhionero, F., Vittorio, N., Carnevali, P., Santangelo, P. **107**, 172
- Optical Identification/Flux Density Relationship for Radio Galaxies
Swarup, G., Subrahmanya, C.R., Venkatakrishna, K.L. **107**, 190
- Structure in the Universe from One Massive Neutrino?
Klinkhamer, F.R. **107**, 235
- The Shape and Orientation of Clusters of Galaxies
Binggeli, B. **107**, 338
- A Westerbork Survey of Clusters of Galaxies. XIV. Abell 779 and Abell 1314
Wilson, A.S., Vallée, J.P. **107**, 416; **47**, 601
- New Study on Quasars and Isotropy of H_0
Reboul, H.J. **108**, 85
- A Possible Large-scale Anisotropy of the Universe
Fliche, H.H., Souriau, J.M., Triay, R. **108**, 256
- Quasars in a Control Field Far from Bright Galaxies
Arp, H., Surdej, J. **109**, 101
- On the Peculiar Motion of the Local Group as Revealed by the $B-V$ vs. HM Relation for ScI Galaxies
Teerikorpi, P. **109**, 314
- Perturbation of the Magnitude-Redshift Relation in an Inhomogeneous Relativistic Model: The Redshift Equations
Nottale, L. **110**, 9
- Galaxy Groups: Sample-dependence of Virial Properties
Mardirossian, F., Mezzetti, M., Giuricin, G. **111**, 86
- Spectral Index - Flux Density Relation for Extragalactic Radio Sources Found in Metre-wavelength Surveys
Gopal-Krishna, Steppe, H. **113**, 150
- The Cosmic Density Wave and Its Observable Vestige
Liu, Y.-Z. **113**, 192
- Statistical Correction of Projection of Radio-sources on the Sky and Application to the Apparent Size-Redshift and Linear Size-Line Width Relation
Nottale, L. **113**, 223
- On the Behaviour of QSO Space Density Beyond $z = 3.5$
Mathez, G., Nottale, L. **113**, 336
- Evolution of Rich Clusters of Galaxies
Roos, N., Aarseth, S.J. **114**, 41
- Massive Neutrino Halos in an Expanding Universe
Fabbri, R., Jantzen, R.T., Ruffini, R. **114**, 219
- Perturbation of the Magnitude - Redshift Relation in an Inhomogeneous Relativistic Model. II. Correction to the Hubble Law Behind Clusters
Nottale, L. **114**, 261
- Evolution of Low Mass Zero Metal Giants up to the Helium Flash
D'Antona, F., Mazzitelli, I. **115**, L1
- The Precision on the Measure of q_0 Using the Gravitational Lensing Effect
Lacroix, G., Schneider, J. **115**, 54
- Abundance of Lithium in Unevolved Halo Stars and Old Disk Stars: Interpretation and Consequences
Spite, F., Spite, M. **115**, 357
- Null Influence of Possible Local Extragalactic Perturbations on Tests of Redshift-Distance Laws
Nicoll, J.F., Segal, I.E. **115**, 398
- Bias in observed nearby clusters of galaxies
Capelato, H.V., Dominguez-Tenreiro, R., Mazure, A., Salvador-Solé, E. **117**, 17
- Holes in cosmology
Occhionero, F., Santangelo, P., Vittorio, N. **117**, 365
- Can all quasars be gravitationally lensed Seyfert's nuclei?
Setti, G., Zamorani, G. **118**, L1
- The Hubble sequence of masses
Meisels, A. **118**, 21

- Perturbation of the magnitude-redshift relation in an inhomogeneous relativistic model. III. Redshift effect intrinsic to clusters of galaxies
Nottale, L. **118**, 85
- An optimal procedure for non-parametric elimination of observational cutoff bias in complete samples
Nicoll, J.F., Segal, I.E. **118**, 180
- Evolution of a Population III star of low mass
Guenther, D.B., Demarque, P. **118**, 262
- Erratum:* The precision on the measure of q_0 using the gravitational lensing effect
Lacroix, G., Schneider, J. **118**, 368
- Evolution of massive pregalactic stars. I. Hydrogen and helium burning
El Eid, M.F., Fricke, K.J., Ober, W.W. **119**, 54
- Evolution of massive pregalactic stars. II. Nucleosynthesis in pair creation supernovae and pregalactic enrichment
Ober, W.W., El Eid, M.F., Fricke, K.J. **119**, 61
- A new approach to scale-invariant gravity (Or: A variable-mass embedding for general relativity)
Wesson, P.S. **119**, 145
- Stability of a $1 M_\odot$ star with decreasing gravitational constant
Boury, A., Scufilaire, R., Noels, A., Gabriel, M. **119**, 253
- Clarification of the angular momentum/mass relation ($J=pM^2$) for astronomical objects
Wesson, P.S. **119**, 313
- Gravitational lens effects of neutrino astronomical objects
Chongming, X., Xuejun, W. **120**, 15
- The ratio of deuterium to hydrogen in interstellar space. V. The line of sight to ϵ Persei
Vidal-Madjar, A., Laurent, C., Gry, C., Bruston, P., Ferlet, R., York, D.G. **120**, 58
- The evolution of shear and gravitational wave perturbations of Friedmann models and the isotropy of the Universe
Sanz, J.L. **120**, 109
- Erratum:* Evolution of Low Mass Zero Metal Stars up to the Helium Flash
D'Antona, F., Mazzitelli, I. **120**, 164
- The formation of disc galaxies
Jones, B.J.T., Wyse, R.F.G. **120**, 165
- Early Brans-Dicke axisymmetric universe with magnetic field
Chakravarti, S.P., De, U.K. **121**, 1
- The geometry of two superclusters Coma-A1367 and Perseus-Pisces
Chincarini, G.L., Giovanelli, R., Haynes, M.P. **121**, 5
- Radio source contributions to small-scale anisotropies of the microwave background
Danese, L., De Zotti, G., Mandolesi, N. **121**, 114
- Large-scale anisotropy of the 3 K background radiation in density wave models
Fabbri, R., Guidi, I., Natale, V. **122**, 151
- Ionization curves and last scattering surfaces in neutrino-dominated universes
Bonometto, S., Lucchin, F., Occhionero, F., Vittorio, N. **123**, 118
- Distance and model dependence of observational galaxy cluster concepts
Segal, I.E. **123**, 151
- New actinide chronometer production ratios and the age of the Galaxy
Thielemann, F.-K., Metzinger, J., Klapdor, H.V. **123**, 162
- The spectral features in the microwave background spectrum due to energy release in the early Universe
Lyubarsky, Y.E., Sunyaev, R.A. **123**, 171
- More on the quasar surface density
Savage, A. **123**, 353
- Gravitational lenses with angular momentum
Ibáñez, J. **124**, 175
- On the statistical distribution of massive fermions and bosons in a Friedmann universe
Ruffini, R., Song, D.J., Stella, L. **125**, 265
- Observational limits on adiabatic theories of galaxy formation from microwave background data
Bonometto, S.A., Caldara, A., Lucchin, F. **126**, 377
- The growth of asphericity in cosmology
Santangelo, P., Occhionero, F., Carnevali, P. **126**, 403
- Galactic evolution of the lithium isotopes
Audouze, J., Boulade, O., Malinie, G., Poilane, Y. **127**, 164
- The difference in light travel time between gravitational lens images. I. Generalization of the wavefront method to arbitrary deflectors and inhomogeneous universes
Kayser, R., Refsdal, S. **128**, 156
- The difference in light travel time between gravitational lens images. II. Theoretical foundations
Borgeest, U. **128**, 162
- An upper limit to the deuterium abundance in a few halo dwarfs
Spite, M., Maillard, J.-P., Spite, F. **128**, 252
- Erratum:* Large-scale anisotropy of the 3 K background radiation in density wave models
Fabbri, R., Guidi, I., Natale, V. **128**, 438
- ### Crab Nebula
- Coherent Radiation from the Crab Nebula Wisps: A Reanalysis
Salvati, M. **72**, 261
- Parametric Instabilities of Commensurable Nonlinear Plasma Waves
Luheshi, M., Stewart, P. **75**, 185
- The Crab Nebula - A Model
Kundt, W., Krotscheck, E. **83**, 1
- A Correspondence Between Optical and Radio Emission in the Crab-type Supernova Remnant 3C 58
Weiler, K.W. **84**, 271
- Magneto-parametric Instabilities IV
Luheshi, M., Stewart, P. **86**, 163
- Optical Timing Observations of the Crab Pulsar 1969-1979
Lohsen, E.H.G. **99**, 202; **44**, 1
- The Stability of the Pulse Intensity of the X-ray Pulsar in the Crab Nebula
Meidav, M., Sadeh, D. **103**, 367
- An Exploding $10 M_\odot$ Star: A Model for the Crab Supernova
Hillebrandt, W. **110**, L3
- Absolute Photometry of the Crab Nebula
Greve, A., van Genderen, A.M. **115**, 79
- Supernova shell structure and the spur of the Crab
Kundt, W. **121**, L15
- The Crab Nebula. II. Near-infrared spectrophotometry of a bright filament
Dennefeld, M., Péquignot, D. **127**, 42
- Cross Section**, see Atomic Data
- Curve-of-Growth**, see Abundances
- Damping Constant**, see Atomic Data

Dark Clouds, see Dust, Interstellar Clouds, Molecular Clouds, Nebulae, Radio Frequency Lines

A Comparison of High Resolution Radio and Far-infrared Maps of M 17

Wilson, T.L., Fazio, G.G., Jaffe, D., Kleinmann, D., Wright, E.L., Low, F.J. **76**, 86

The Nature of the UV Radiation Background

Maucherat-Joubert, M., Deharveng, J.M., Cruvellier, P. **88**, 323

A Study of Cold Hydrogen in the Dark Cloud Lynds 134

Winnberg, A., Grasshoff, M., Goss, W.M., Sancisi, R. **90**, 176

The Distribution of OH, CH and Extinction in L 1642

Sandell, G., Johansson, L.E.B., Nguyen-Q-Rieu, Mattila, K. **97**, 317

H₂O Masers Associated with Bright Nebulosities in Dark Clouds

Sandell, G., Olofsson, H. **99**, 80

Multicolour Photometry of Stars in the Ophiuchus Dark Cloud Region

Chini, R. **99**, 346

Small Nebulae and Herbig-Haro Objects. I. A Survey of Southern Dark Clouds

Reipurth, B. **100**, 333; **44**, 379

Formaldehyde, cold neutral hydrogen and dust distribution in a globular filament in Taurus

Pöppel, W.G., Rohlf, K., Celnik, W. **126**, 152

Further observations of the $N=1 \rightarrow 0$ transition of C₄H

Bell, M.B., Matthews, H.E., Sears, T.J. **127**, 241

Data Analysis, see also Observational Methods, Line Profiles

On the Reduction Model of Astrogaphic Plates

von der Heide, K. **72**, 324

The Visible Spectrum of β Ori, B8 I

Crivellari, L., Flora, U., Rusconi, L., Sedmak, G. **73**, 365; **36**, 73

Fourier Deconvolution of Electronographic Images

Hawkins, M.R.S. **76**, 46

A New Computerized Method for Plate Calibration: An Application to Photometry of Galaxies

Agnelli, G., Nanni, D., Pittella, G., Trevese, D., Vignato, A. **77**, 45

Statistically Rigorous Reduction of Stellar Polarization Measurements

von der Heide, K., Knoechel, G. **79**, 22

The Inversion of Abel's Integral Equation in Astrophysical Problems

Craig, I.J.D. **79**, 121

β Photometry of Przybylski's Star, A Comparison of Period Determination Methods

Weiss, W.W., Kreidl, T.J. **81**, 59

Fast Evaluation of Fourier Series

Coffey, S., Deprit, A. **81**, 310

Accuracy of the Maximum Entropy Method

Strauss, F.M. **81**, 344

A Simple Procedure for the Reduction of Echelle Spectrograms

Spite, M. **81**, 365

Synthetic Spectrum of the Integrated Starlight Between 3000 and 10000 Å. Part I. Method of Calculation and Results

Mattila, K. **81**, 388; **39**, 53

On the Reduction of Three Dimensional Interferometer Measurements

Frater, R.H., Docherty, I.S. **84**, 75

Sky Background Estimation and Application

Bijaoui, A. **84**, 81

Hermite Polynomials and One-dimensional Restoration in Radio Astronomy

Leonis, G. **85**, 168

The Rotation Measures of Radio Sources and Their Data Processing

Vallée, J.P. **86**, 251

A New Algorithm to Determine Image Edges. Application to Lunar Craters

Bijaoui, A., Froeschlé, M. **87**, 250

A New Method of Deconvolution and its Application to Lunar Occultations

Subrahmanya, C.R. **89**, 132

Restoration of Lunar Occultation Scans

von der Heide, K. **89**, 220

An Efficient Implementation of the Algorithm "CLEAN"

Clark, B.G. **89**, 377

Methods for Accurate Photographic Stellar Spectrophotometry Using the Solar Spectrum as Calibration

Lind, J., Dravins, D. **90**, 151

Methods for the Analysis of Stellar Spectra Veiled by Lines (III)

Greve, A., Zwaan, C. **90**, 239

The Application of a Coherent Optical Data Processing System to Photographically Recorded Astronomical Spectra

Bates, B., Giaretta, D.L., Sweeney, P.J.P. **90**, 318

The Maximum Entropy Method of Image Restoration-properties and Limitations

Komesaroff, M.M., Narayan, R., Nityananda, R. **93**, 269

On the Recovery of Images from Incomplete Interferometric Measurements

Baker, P.L. **94**, 85

Cepstral Analysis of Broad-band Radio Emission. New Possibilities in Radio Astronomy

Afraimovich, E.L. **97**, 366

Balloon-borne Imagery of the Solar Granulation. III. Digital Analysis of a White-light Time Series

Wittmann, A. **99**, 90

The Third Central Moment of Photospheric Lines as a Measure of Velocity Gradients and Line Shifts

Marmolino, C., Severino, G. **100**, 191

On the Computation of Constant α Force-free Magnetic Field

Alissandrakis, C.E. **100**, 197

Fits: A Flexible Image Transport System

Wells, D.C., Greisen, E.W., Harten, R.H. **100**, 332; **44**, 363

An Extension of Fits for Groups of Small Arrays of Data

Greisen, E.W., Harten, R.H. **100**, 332; **44**, 371

A Comparison of Optical and Digital Fourier Transformation of Solar Granulation

von der Lühe, O. **101**, 277

A Measurement of the Resemblance Between Two Contours

Mouradian, Z. **101**, 292

Reduction of Double-Beam Observations of Extended Radio Sources

Pfleiderer, J. **101**, 320

Recursive Estimation of the Reduction Parameters of an Astrometric Plate

Fresneau, A. **102**, 143

Extended Radio Sources: A Method for Baseline Improvement

Pfleiderer, J. **103**, 220

Automatic Classification of Galaxy Images by Fourier Structural Analysis

Sedmak, G., Trujillo Lamas, M.L. **104**, 93

- The Analysis of Solar Limb Observations. I. Restoration of Data in a Tilted Reference Frame
Wiesmeier, A., Durrant, C.J. **104**, 207
- An Alternative Procedure for Extracting IUE Low Resolution Spectra
Crivellari, L., Morossi, C. **106**, 332
- IUE Data Reduction. The Parameterization of the Motion of the IUE Réseau Grids and Spectral Formats as a Function of Time and Temperature
Thompson, R.W., Turnrose, B.E., Bohlin, R.C. **107**, 11
- Analysis of the Optical Spectra of Solar Flares. I. The Flare of April 30, 1976
Acampa, E., Falciani, R., Sambuco, A.M., Smaldone, L.A. **107**, 414; **47**, 485
- Automatic Image Classification
Butchins, S.A. **109**, 360
- The Distribution of H II Regions in External Galaxies. I
Considère, S., Athanassoula, E. **111**, 28
- On the Combination of Partially Overlapping Sets of Data
Reed, B.C., FitzGerald, M.P. **111**, 81
- Velocity Fields and Spectral Line Asymmetries: A Linearized Analytical Approach to the Theory of the Line Bisector in a Milne-Eddington Atmosphere
Buonaura, B., Caccin, B. **111**, 113
- "Least Square Fitting" and "CLEAN": a Combination for Analysis of One-dimensional Synthesis
Palagi, F. **111**, 211; **49**, 101
- A Digital Image Processing Method for Automatic Reduction of Echelle Spectrograms
Moreno, V., Llorente de Andrés, F., Jiménez, J. **111**, 260
- The Maximum Entropy Principle in Two-dimensional Spectral Analysis
Pendrel, J.V., Smylie, D.E. **112**, 181
- On the Linearity of the SWP Camera of the International Ultraviolet Explorer (IUE): A Correction Algorithm
Holm, A., Bohlin, R.C., Cassatella, A., Ponz, D.P., Schiffer, F.H. **112**, 341
- The Width of Echelle Orders in IUE Images as Derived with the Astronomical Image Display and Analysis (AIDA) System in Tübingen
de Boer, K.S., Preussner, P.-R., Grewing, M. **115**, 128
- Seeing-independent Definitions of the Solar Limb Position
Brown, T.M. **116**, 260
- One-dimensional high resolution image reconstruction on Eta Carinae at 4.6 μm with speckle data
Chelli, A., Perrier, C., Biraud, Y.G. **117**, 199
- On the methods for determining galaxy velocity dispersions
Larsen, N., Norgaard-Nielsen, H.U., Kjaergaard, P., Dickens, R.J. **117**, 257
- Reconstruction of a polarized brightness distribution by the maximum entropy method
Nityananda, R., Narayan, R. **118**, 194
- An analytic solution for stellar space densities
Reed, B.C. **118**, 229
- A study of a correlation tracking method to improve imaging quality of ground-based solar telescopes
von der Lühe, O. **119**, 85
- Principal components analysis of spectral data. I. Methodology for spectral classification
Whitney, C.A. **119**, 325; **51**, 443
- Principal components analysis of spectral data. II. Error analysis and applications to interstellar reddening, luminosity classification of M supergiants, and the analysis of VV Cephei stars
Whitney, C.A. **119**, 325; **51**, 463
- Analysis of optical imagery for Seyfert's Sextet and VV 172
Sulentici, J.W., Lorre, J.J. **120**, 36
- A generalized algorithm for efficient photometric reductions
Manfroid, J., Heck, A. **120**, 302
- A method of stabilizing the clean algorithm
Cornwell, T.J. **121**, 281
- The influence of seeing on the observation of short period fluctuations in the solar atmosphere
Endler, F., Deubner, F.-L. **121**, 291
- Contribution to the reduction of photoelectric occultation observations using an integrated deconvolution method (Text in French)
Froeschlé, M., Meyer, C. **121**, 319
- A comparison of several image processing techniques applied to photographically recorded astronomical spectra
Bates, B., Chaudhuri, B.B. **123**, 253
- A new method of determining nebular radial velocities from Fabry-Perot interferograms
Thonnat, M., Ruffini, B., Caplan, J., Llebaria, A. **124**, 236
- One-dimensional high time resolution solar observations with the Westerbork Synthesis Radio Telescope
Kattenberg, A., Palagi, F. **125**, 1
- A method to improve the visibility of time-variable gamma-ray sources in structured background
Özel, M.E., Mayer-Haefelwanger, H.A. **125**, 130
- Degenerate Stars**
- Some Aspects of Low-mass Close Binary Models for Bright Galactic Bulge X-ray Sources and 4U 1626-67
Kieboom, K.H., Verbunt, F. **95**, L11
- Phase transitions in dense stars
Diaz Alonso, J. **125**, 287
- Phase transitions in stellar cores. I. Equilibrium configurations
Schaeffer, R., Haensel, P., Zdunik, L. **126**, 121
- Delta Cephei Stars**, see Cepheids
- Delta Scuti Stars**, see also Dwarf Cepheids
- A Possible Interpretation of Subgiant δ Scuti Variables
Valtier, J.-C., Baglin, A., Auvergne, M. **73**, 329
- Photometry of the Dwarf Cepheids SZ Lyn and EH Lib
Garrido, R., Alfaro, E.J., Quintana, J.M., Saez, M. **73**, 365; **36**, 51
- B Band Photometry of ϵ Cep
Lopez de Coca, P., Costa, V., Rolland, A., Walker, E.N. **73**, 365; **36**, 61
- γ Boo, a Classical Evolved δ Scuti Star
Auvergne, M., Le Contel, J.-M., Baglin, A. **76**, 15
- Rapid Line Variability. IV. Constancy of Two Reported Variables
Breger, M., Light, A., Scholtes, M. **78**, 11
- Study of the Variability of the Delta Scuti Stars. I. Photometric Observations of the Star 38 Cancri
Guerrero, G., Mantegazza, L., Scardia, M. **78**, 250; **38**, 181
- 21 Vul a New Luminous Long Period γ Scuti Star
Garrido, R., Saez, M. **79**, 347
- The Short Period Radial Velocity Variability of the Si Star CG And (HD 224801)
Rice, J.B. **84**, 359

Orbital Motion of the Pulsating Star V644 Her (Text in French)

Bardin, C., Imbert, M. **106**, 380; **47**, 319

Mg II *h* and *k* Line Observations of Delta Scuti Variables

Fracassini, M., Pasinetti, L.E. **107**, 326

Photoelectric and Spectrographic Observations of ϱ Vir (HR 4828)

Antonello, E., Mantegazza, L. **112**, 395; **49**, 709

HR 2724 - A New Bright Variable in the δ Scuti Instability Strip

Baade, D., Stahl, O. **114**, 131

DQ Cephei, a Delta Scuti Star of constant variability

Peña, J.H., Peniche, R., Margrave, T.E., Hobart, M.A., González, S.F. **118**, 209; **51**, 71

Properties of Am, δ Del, and δ Sct stars in the VBLUW system

Wiertz, M.J.J., van Genderen, A.M. **121**, 35

HR 6522: a previously unknown multiperiodic delta Scuti star

Waelkens, C., Bartholdi, P. **121**, 162; **52**, 1

Delta Scuti variables. I. Theoretical evolution sequences for standard models and models with two-zone envelopes

Andreasen, G.K., Hejlesen, P.M., Petersen, J.O. **121**, 241

Delta Scuti variables. II. Comparisons of theoretical evolution sequences with observational data

Andreasen, G.K. **121**, 250

Period determination of the Delta Scuti star HR 5005

Peña, J.H., Peniche, R., González, S.F. **124**, 153; **53**, 81

Light variations of the Am star 32 Vir

Bartolini, C., Grilli, F., Parmeggiani, G., Piccioni, A., Silveri, P. **124**, 155; **53**, 139

Study of the variability of the Delta Scuti stars. VI. Pulsational behaviour of HR 1392 (69 Tau)

Bossi, M., Guerrero, G., Mantegazza, L., Scardia, M. **126**, 222; **53**, 395

Study of the variability of the Delta Scuti stars. VII. The problem of stability and monop periodicity in 20 CVn

Bossi, M., Guerrero, G., Mantegazza, L., Scardia, M. **126**, 222; **53**, 399

The group of low-harmonic pulsating CP2 stars: HD 10088, a new candidate

Weiss, W.W. **128**, 152

Density Waves

Demonstration of the Response to Spiral Density Waves by Investigation of Individual Stellar Orbits in Galaxies

Frahm, R., Fuchs, B., Thielheim, K.O. **72**, 263

Spiral Modes in Gaseous Cylindrical Systems

Robe, H. **75**, 14

The Density Response of a Typical Disc Stellar Population to a Spiral Perturbation near the Corotation Resonance

Mennessier, M.O., Martinet, L. **75**, 276

A Constraint on the Influence of Density Waves on the Rate of the Star Formation

Cassé, M., Kunth, D., Scalo, J.M. **76**, 346

Erratum: The Density Response of a Typical Disc Stellar Population to a Spiral Perturbation near the Corotation Resonance

Mennessier, M.O., Martinet, L. **77**, 370

Self-consistent Bar Driven Spiral Density Waves in a Disk Galaxy

Berman, R.J., Pollard, D.J., Hockney, R.W. **78**, 133

Contributions to the Theory of Spiral Structure. I. Energy and Lifetime of Density Waves and the Classification of Spiral Galaxies

Feitzinger, J.V., Schmidt-Kaler, Th. **88**, 41

The Dynamics of the Spiral Galaxy M 81. I. Axisymmetric Models and the Stellar Density Wave

Visser, H.C.D. **88**, 149

The Dynamics of the Spiral Galaxy M 81. II. Gas Dynamics and Neutral hydrogen Observations

Visser, H.C.D. **88**, 159

Contributions to the Theory of Spiral Structure. IV. The Propagation of Sound Waves in an Inhomogeneous Interstellar Medium

Schmidt-Kaler, Th., Wiegandt, R. **89**, 67

Limits of the Halo Component in Spiral Galaxies

Terzides, Ch.K. **99**, 144

Optical Study of NGC 6946 (in French)

Peton, A. **114**, 1

Deuterium

A New Upper Limit to the Abundance Ratio of Atomic Deuterium to Hydrogen in the Direction of the Galactic Centre

Anantharamaiah, K.R., Radhakrishnan, V. **79**, L9

An Upper Limit for the Deuterium Abundance in Canopus

Peimbert, M., Wallerstein, G., Pilachowsky, C.A. **104**, 72

Evidence of hourly variations in the deuterium Lyman line profiles toward ϵ Persei

Gry, C., Laurent, C., Vidal-Madjar, A. **124**, 99

Stellar deuterium abundance: a new upper limit in Canopus

Ferlet, R., Dennefeld, M., Spite, M. **124**, 172

Diameter Luminosity Relation

Diameter Luminosity Relation. IV. Application to the Determination of the Hubble-constant

Paturel, G. **71**, 19

La relation diamètre-luminosité pour les galaxies elliptiques et lenticulaires

Bigay, J.H., Paturel, G. **91**, 262; **42**, 69

Diffusion

Dynamical Evolution of Spherical Gas-dust Nebulae Including Diffusion Effects

Gail, H.-P., Sedlmayr, E. **76**, 158

Radiation Forces and the Abundance of Boron in Normal and Peculiar Stars of Type A and B

Borsenberger, J., Michaud, G., Praderie, F. **76**, 287

Element Stratification in the Atmospheres of Main Sequence Stars: The Silicon Accumulation

Alecian, G., Vauclair, S. **101**, 16

On the Physical Nature of Delta Delphini Stars

Saez, M., Auvergne, M., Valtier, J.-C., Baglin, A., Morel, P. **101**, 259

Diffusion Models for Magnetic Ap-Bp Stars

Michaud, G., Mégessier, C., Charland, Y. **103**, 244

On the Detection of Abundance Stratifications in Peculiar Stars Through the Curve of Growth Method

Alecian, G. **107**, 61

The Ultraviolet Spectrum of the Old Novae HR Del, GK Per, RR Pic, and RS Oph

Rosino, L., Bianchini, A., Rafanelli, P. **108**, 243

Semiconvective diffusion and energy transport

Langer, N., Sugimoto, D., Fricke, K.J. **126**, 207

Distances, see Parallaxes

VBLUW photometry of the open cluster NGC 2516

Verschoor, J.N., van Genderen, A.M. **126**, 223; **53**, 419

Doppler Width, see Line Profiles

Double Galaxies, see also Interacting Galaxies

The Radio Continuum Emission from Spiral Galaxies in Double Systems

Hummel, E. **89**, L1

The Radio Continuum Radiation of Spiral Galaxies in Multiple Systems

Hummel, E. **96**, 111

Neutral Hydrogen Observations of Double Spiral Galaxies. I. NGC 5905 and NGC 5908

van Moorsel, G.A. **107**, 66

Neutral hydrogen observations of double spiral galaxies. III. NGC 3504/3512, NGC 4085/4088, IC 65/UGC 622, NGC 797/801

van Moorsel, G.A. **127**, 423; **54**, 1

Neutral hydrogen observations of double spiral galaxies. IV. NGC 4618/4625, NGC 4016/4017, NGC 3725/UGC 6528, UGC 725/728, NGC 2336/IC 467

van Moorsel, G.A. **127**, 423; **54**, 19

Double Stars, visual

Comparison between Proper Motions Obtained by the Rectilinear Trajectories of Optical Double Stars and Those Given by the SAO Catalogue

Debehogne, H., de Freitas Mourão, R.R. **71**, 55

Visual Measures of 193 Double and Multiple Stars

Wilson, Jr., R.H. **71**, 273; **35**, 193

New Double Stars (15th Series) Discovered at Nice

Couteau, P. **71**, 273; **35**, 197

Measurements of Double Stars Made at Nice

Couteau, P. **73**, 364; **36**, 11

A new Method of Orbit Calculation for Double Stars

Valbousquet, A. **77**, 159

Phase Effect Detection at the CERGA Stellar Interferometer, Application to Capella's Orbital Motion

Koechlin, L., Bonneau, D., Vakili, F. **80**, L13

Elements Orbitaux de Quatorze Etoiles Doubles Visuelles

Baize, P. **81**, 389; **39**, 83

Measures of Visual Double Stars

Wilson, R.H. Jr. **82**, 394; **39**, 197

Orbital Elements of the Visual Binary Star ADS 11871 = β 648, Obtained by Two Methods

Pannunzio, R., Delgrosso, A. **83**, 385; **39**, 423

Focal Grating Photometer for the Determination of the Difference of Magnitude in Double Stars

Platzeck, R.P., Ferrer, O.E. **84**, 106

Photometric Differences of Magnitude in Southern Double Stars

Ferrer, O.E. **84**, 108

Mesures d'étoiles doubles à Mérida, Vénézuéla

Valbousquet, A. **86**, 268; **40**, 347

Speckle Interferometric Observations of Binary Systems with the Haute-Provence 1.93 m Telescope

Bonneau, D., Foy, R. **86**, 295

Ages and *u*by β Photometry of Wide Visual Binaries - II

Oblak, E., Chareton, M. **88**, 284; **41**, 255

Redressement des orbites des couples visuels ADS 1833 et 6871 AB

Valbousquet, A. **89**, 251; **41**, 295

Photographic Measures of Double Stars

Pannunzio, R., Siciliano, F. **89**, 251; **41**, 319

On the Nature of the Orbit of a Visual Binary Computed from Three Fundamental Positions and the Areal Constant

Dommanget, J. **94**, 45

New Orbits for Visual Binaries 17 and HJ 3683

Valbousquet, A. **95**, 208; **43**, 23

Étoiles doubles nouvelles (16^e série) découvertes à Nice

Couteau, P. **95**, 209; **43**, 79

The Motions of 4 Southern Double Stars

Wilson, R.H. Jr. **95**, 210; **43**, 99

Éléments orbitaux des étoiles doubles visuelles ADS 1709 et ADS 10188

Scardia, M. **97**, 416; **43**, 375

A Catalogue of Variable-visual Binary Stars

Proust, D., Ochsenbein, F., Pettersen, B.R. **99**, 401; **44**, 179

Elements orbitaux de quarante-trois étoiles doubles visuelles

Baize, P. **99**, 402; **44**, 199

Liste des étoiles doubles visuelles découvertes dans le zodiaque depuis 1961

Couteau, P. **99**, 403; **44**, 305

Remark on the Computation of Position Angle and Distance From Standard Coordinates

Eichhorn, H. **102**, 35

Computation of Orbits of Visual Binaries ADS: 1223, 2459, 1321

Valbousquet, A. **102**, 279; **45**, 181

Eléments Orbitaux des Etoiles Doubles Visuelles ADS 1737, ADS 2446, ADS 2612 et ADS 2799

Scardia, M. **102**, 281; **45**, 431

Statistical Method for Calculating Parallaxes and Masses of Binaries with Unknown Orbits

Couteau, P. **102**, 313

Visual Double Stars Measurements

Morel, P.-J. **103**, 207; **46**, 3

Is 21 Ari = COU 79 a Multiple System?

Couteau, P., Morel, P.-J. **105**, 323

Photographic Measures of Visual Double Stars

Pannunzio, R., Siciliano, F. **106**, 181; **47**, 159

Orbital Elements of Visual Binary Stars ADS 221 et ADS 1762 (Text in French)

Scardia, M. **106**, 182; **47**, 167

The Orbits of the Visual Double Stars ADS 10621 and ADS 15650

Morel, P.-J. **106**, 378; **47**, 217

New Photographic Method for the Measurement of Visual Binaries

Scardia, M., Pannunzio, R. **107**, 362

Orbits of 16 Visual Binaries

Heintz, W.D. **107**, 415; **47**, 569

*u*by β Photometry of Visual Double Stars: A Comparison With Stellar Models and Isochrones

Olsen, E.H. **110**, 215

Revised Orbital Elements of Visual Binary Stars ADS 3182 and ADS 3483 (Text in French)

Scardia, M. **112**, 179; **49**, 503

Measurements of Double Stars Made in Nice. Orbits of Three Binary Stars (Text in French)

Couteau, P. **114**, 420; **50**, 49

Measures of Southern Double Stars in 1981

Wilson, R.H., Jr. **114**, 421; **50**, 115

Contribution to the Study of Composite Spectra. III. Spectrum Binaries: Intermediate Class Between Visual and Spectroscopic Binaries? (Text in French)

Carquillat, J.M., Nadal, R., Ginestet, N., Pedoussaut, A. **115**, 23

Photographic measures of visual double stars

Pannunzio, R., Morbidelli, R. **118**, 208; **51**, 63

A study of visual double stars with early type primaries. I. Spectroscopic results

Gahm, G.F., Ahlin, P., Lindroos, K.P. **118**, 210; **51**, 143

- A study of visual double stars with early type primaries. II. Photometric results
Lindroos, K.P. **118**, 210; **51**, 161
- Provisional orbital elements of visual binary stars ADS 1360 and ADS 3082 (text in French)
Scardia, M. **119**, 324; **51**, 417
- Orbital elements for eleven visual binaries (text in French)
Baize, P. **119**, 325; **51**, 479
- Photographic observations of visual double stars
van Albada-van Dien, E. **121**, 329; **52**, 193
- Micrometric measurements of southern double stars
Argyle, R.W. **124**, 155; **53**, 177
- Accurate equatorial coordinates of known or new components of some 200 double and multiple systems
Soulié, G. **128**, 261; **54**, 281
- Dust**, see also Grains, Interplanetary Dust, Interstellar Absorption, -Clouds, -Matter
- Continuum Observations of the H II Regions W 51 A, W 3 (Main), W 49 A and DR 21 at 3.9 mm
Malkamäki, L., Sandell, G., Mattila, K., Gebler, K.-H. **71**, 198
- Cosmic Dust in the Central Region of the Galaxy and Anomalous Infrared Sources at $l = 335^\circ$, $b = -1^\circ$
Oda, N., Maihara, T., Sugiyama, T., Okuda, H. **72**, 309
- Radio Galaxies with Dust Lanes
Kotanyi, C.G., Ekers, R.D. **73**, L1
- Infrared Emission by Dust Grains near Variable Primary Sources. I. General Considerations
Bode, M.F., Evans, A. **73**, 113
- Dust and Young Stars in the Lenticular Galaxy NGC 5102
Danks, A.C., Laustsen, S., van Woerden, H. **73**, 247
- Near Infrared Observations of NGC 2024
Frey, A., Lemke, D., Thum, C., Fahrbach, U. **74**, 133
- Radio Observations of NGC 3665: An Elliptical Galaxy with a Dust Lane
Kotanyi, C.G. **74**, 156
- Infrared Photometry and Spectrophotometry of G 75.84 + 0.4
Pipher, J.L., Soifer, B.T., Krassner, J. **74**, 302
- Infrared Emission of Dusty H II Regions
Tielens, A.G.G.M., Jong, T. de **75**, 326
- Dynamical Evolution of Spherical Gas-dust Nebulae Including Diffusion Effects
Gail, H.-P., Sedlmayr, E. **76**, 158
- Dynamical Evolution of a Dusty H II Region
Gail, H.-P., Sedlmayr, E. **77**, 165
- Effect of Dust on the [O II] Emission from the Planetary Nebula NGC 7027
Péquignot, D. **78**, 29
- The Reddening Law and Dust Content in Nearby Extragalactic Systems
Isserstedt, J. **83**, 317
- A New Model for Scattering by Irregular Absorbing Particles
Chiappetta, P. **83**, 348
- Spatial Distribution of Fine Structure Line Radiation in W 3 IRS 1: Implications for Far UV Properties of Dust Opacity
Lacasse, M.G., Herter, T., Krassner, J., Helfer, H.L., Pipher, J.L. **86**, 231
- Statistical Distribution of the Interstellar Dust Temperature
Rouan, D. **87**, 169
- Monte Carlo Analysis of Polarization by Mie Scattering in Circumstellar Envelopes
Daniel, J.-Y. **87**, 204
- 8-13 μ m Spectrophotometry of S 106
Hefele, H., Hölzle, E. **88**, 145
- Infrared Spectra of Hydrated Silicates, Carbonaceous Chondrites, and Amorphous Carbonates Compared with Interstellar Dust Absorptions
Knacke, R.F., Krätschmer, W. **92**, 281
- Population Inversion and Saturation Behaviour of Celestial Masers in Dusty Regions
Bettwieser, E. **93**, 8
- Plasma Corrections to Dipolar Radio Emission by Cosmic Grains
Meyer-Vernet, N. **97**, 208
- Dust Temperature and IR Emission in High Extinction Molecular Clouds
Natta, A., Palla, F., Panagia, N., Preite-Martinez, A. **99**, 289
- Detection of the 3.3 μ m Emission Feature in the Nuclei of IC 4329 A and NGC 5506
Moorwood, A.F.M., Salinari, P. **100**, L16
- Polarization of Starlight in W 3
Lenzen, R., Schulz, A., Schmidt, Th. **100**, 249
- The Origin of the Diffuse Galactic Far Infrared and Sub-millimeter Emission
Mezger, P.G., Mathis, J.S., Panagia, N. **105**, 372
- Photoelectric Heating of H II Regions
Maciel, W.J., Pottasch, S.R. **106**, 1
- The Correlation Between Diffuse Far Ultraviolet Background and Line of Sight Hydrogen Column: Dust Scattering and H₂ Fluorescence
Jakobsen, P. **106**, 375
- The Gas to Dust Ratio and the Near-infrared Extinction Law in the Large Magellanic Cloud
Koornneef, J. **107**, 247
- On the Phase Matrix Basic to the Scattering of Polarized Light
Siewert, C.E. **109**, 195
- Monte Carlo Study of Highly Polarized Cool Stars
Daniel, J.-Y. **111**, 58
- The Graphite Rich Cepheus OB 3 Association
Barsella, B., Panagia, N., Perinotto, M. **111**, 130
- Photographic Surface Photometry of the Milky Way. II. Surface Photometry in the Region of the Dark Cloud "Coalsack" in U, B, V, R (in German)
Seidensticker, K.J., Schmidt-Kaler, T., Schlosser, W. **114**, 60
- Numerical Simulation of Radiative Transfer in Circumstellar Dust Shells. I. Spherical Shells
Lefèvre, J., Bergeat, J., Daniel, J.-Y. **114**, 341
- On Interstellar Linear Polarization and Grain Growth
Aannestad, P.A. **115**, 219
- A Scattering Model for the Zodiacal Light Particles
Schiffer, R., Thielheim, K.O. **116**, 1
- Ultraviolet Spectrum of the Sky Background at Different Galactic Latitudes
Zvereva, A.M., Severny, A.B., Granitzky, L.V., Hua, C.T., Cruvellier, P., Courtès, G. **116**, 312
- The three micron "ice" band in grain mantles
Hagen, W., Tielens, A.G.G.M., Greenberg, J.M. **117**, 132
- Properties of amorphous H₂O ice and origin of the 3.1 μ m absorption
Léger, A., Gauthier, S., Défourneau, D., Rouan, D. **117**, 164
- Abnormal extinction and dust properties in M 16, M 17, NGC 6357 and the Ophiuchus dark cloud
Chini, R., Krügel, E. **117**, 289
- H₂ production in comets
Pirronello, V., Strazzulla, G., Foti, G. **118**, 341

- How to maintain the spatial distribution of interplanetary dust
Leinert, C., Röser, S., Buitrago, J. **118**, 345
- Grains spin-up by inverse Cerenkov effect
Meyer-Vernet, N. **119**, 117
- Excitation conditions in H II regions
Herter, T., Helfer, H.L., Pipher, J.L. **119**, 163; **51**, 195
- A laboratory study of the infrared spectra of interstellar ices
Hagen, W., Tielens, A.G.G.M., Greenberg, J.M. **119**, 324; **51**, 389
- Numerical simulation of radiative transfer in circumstellar dust shells. II. Ellipsoidal shells
Lefèvre, J., Daniel, J.-Y., Bergeat, J. **121**, 51
- Emission and absorption at 6 cm from excited OH associated with compact H II regions
Gardner, F.F., Martín-Pintado, J. **121**, 265
- Status of laboratory experiments on ice mixtures and on the 12 μ m H₂O ice feature
Kitta, K., Krätschmer, W. **122**, 105
- The elliptical galaxy NGC 4696: CCD observations of an absorbing lane
Jørgensen, H.E., Norgaard-Nielsen, H.U., Pedersen, H., Rasmussen, I.L., Schnopper, H. **122**, 301
- Three-micron emission features in Herbig Be/Ae stars and related objects
Whittet, D.C.B., Williams, P.M., Bode, M.F., Davies, J.K., Zealey, W.J. **123**, 301
- Structure of molecular clouds. VII. Energy balance in clouds with star formation (Type IIb)
Stenholm, L.G. **124**, 247
- Diffuse light near Zeta Orionis and the Horsehead nebula, and anomalous extinction of HD 37903, as measured with the ANS
de Boer, K.S. **125**, 258
- The dust envelope of the Herbig Ae star, AB Aur
Catala, C. **125**, 313
- The fraction of the sky screened by local diffuse dust clouds
Knude, J. **126**, 89
- Dust-driven winds. I. A two-fluid model and its numerical solution
Berruyer, N., Frisch, H. **126**, 269
- The physical structure of the globule B 335
Krügel, E., Stenholm, L.G., Steppe, H., Sherwood, W.A. **127**, 195
- UV background radiation, dust and gas at high galactic latitude
Joubert, M., Masnou, J.L., Lequeux, J., Deharveng, J.M., Cruvellier, P. **128**, 114
- Far-infrared spectrophotometry of the Orion Molecular Cloud I ridge
Drapatz, S., Haser, L., Hofmann, R., Oda, N., Iyengar, K.V.K. **128**, 207
- Interstellar radiation field and dust temperatures in the diffuse interstellar matter and in giant molecular clouds
Mathis, J.S., Mezger, P.G., Panagia, N. **128**, 212
- The IR silicate features as a measure of grain size in circumstellar dust
Papoular, R., Pégourié, B. **128**, 335
- Dwarf Cepheids**, see Cepheids
- Period Changes in Dwarf Cepheids
Percy, J.R., Matthews, J.M., Wade, J.D. **82**, 172
- Radial Velocities of a New Short Period Variable Star: HD 200925
Imbert, M. **86**, 259
- HD 37819, a New δ Scuti Star: Determination of the Oscillation Mode
Burki, G., Mayor, M. **97**, 4
- Radial Velocities of the Dwarf Cepheid SZ Lyn at High Temporal Resolution
Bardin, C., Imbert, M. **98**, 198
- A Dwarf Cepheid in the Globular Cluster Omega Centauri?
Niss, B. **98**, 415
- The Delta Scuti Variable BD + 28°1494
Broglia, P., Conconi, P. **100**, 201
- Dwarf Galaxies**
- A Morphological Study of 15 Blue Dwarf Galaxies
Barbieri, C., Bonoli, C., Rafanelli, P. **76**, 369; **37**, 541
- Metallicity and Dynamical Parameters for Spheroidal and Elliptical Galaxies
Vigroux, L., Chièze, J.P., Lazareff, B. **98**, 119
- Preliminary Stellar Photographic Photometry in the Sculptor Dwarf Irregular Galaxy (SDIG)
Lequeux, J., West, R.M. **103**, 319
- Stability of star clusters as galactic satellites. I. Motion in the cluster orbital plane
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **121**, 183
- Stability of star clusters as galactic satellites. II. Motion perpendicular to the cluster orbital plane
Angeletti, L., Giannone, P. **121**, 188
- Dwarf Novae**, see also Cataclysmic Variables
- Spectroscopic Observations of Dwarf Novae. I. HT Cas
Rafanelli, P. **76**, 365
- The Outbursts of the Dwarf Nova VW Hydri: A Comparative Study of Short and Long Eruptions
Haefner, R., Schoembs, R., Vogt, N. **77**, 7
- Photometry of V 436 Centauri During Superoutburst in May 1978
Semeniuk, I. **81**, 388; **39**, 29
- Periodic and Secular Variations in the Lightcurve of Dwarf Nova EX Hydrae
Vogt, N., Krzeminski, W., Sterken, C. **85**, 106
- The Physical Parameters of the Dwarf Nova OY Car
Ritter, H. **85**, 362
- The Recent Outburst of the Dwarf Nova WZ Sagittae
Ortolani, S., Rafanelli, P., Rosino, L., Vittone, A. **87**, 31
- Spectroscopy of EX Hydrae
Breysacher, J., Vogt, N. **87**, 349
- The SU UMa Stars, an Important Sub-group of Dwarf Novae
Vogt, N. **88**, 66
- EK Trianguli Australis, a New SU UMa Type Dwarf Nova
Vogt, N., Semeniuk, I. **89**, 223
- Outburst Photometry of the Dwarf Nova SS Cygni
Hopp, U., Witzigmann, S. **89**, 227
- Photometry and Polarimetry of VW Hydri during the October 1978 Supermaximum
Schoembs, R., Vogt, N. **91**, 25
- On the Size of Accretion Disks in Cataclysmic Binaries
Ritter, H. **91**, 161
- The Eclipsing Dwarf Nova OY Carinae: Ephemeris and Physical Parameters
Vogt, N., Schoembs, R., Krzeminski, W., Pedersen, H. **94**, L29
- Classification of Cosmic Sources: A Statistical Approach
Giovannelli, F., Coradini, A., Lasota, J.P., Polimene, M.L. **95**, 138
- High-time Resolution Spectroscopy of VW Hydri and WX Hydri
Schoembs, R., Vogt, N. **97**, 185

TT Ari: A New Dwarf Nova

Krautter, J., Klare, G., Wolf, B., Wargau, W., Drechsel, H., Rahe, J., Vogt, N. **98**, 27

A Study of the Spectrum of WZ Sge During Its 1978 Outburst

Friedjung, M. **99**, 226

An Atlas of Southern and Equatorial Dwarf Novae

Vogt, N., Bateson, F.M. **110**, 182; **48**, 383

IUE Observations of Dwarf Novae During Active Phases

Klare, G., Krautter, J., Wolf, B., Stahl, O., Vogt, N., Wargau, W., Rahe, J. **113**, 76

PS 74: The Discovery of a New SU UMa Type Dwarf Nova with High Orbital Inclination

Barwig, H., Hunger, K., Kudritzki, R.P., Vogt, N. **114**, L11

Photometric Observations of CN Orionis

Schoembs, R. **115**, 190

Constraints on the system parameters of the dwarf nova AH Herculis

Wargau, W., Rahe, J., Vogt, N. **117**, 283

VW Hydri revisited: conclusions on dwarf nova outburst models

Vogt, N. **118**, 95

Photoelectric UVB photometry of southern and equatorial dwarf novae

Vogt, N. **124**, 151; **53**, 21

BD Pavonis: a unique cataclysmic variable

Barwig, H., Schoembs, R. **124**, 287

Superoutbursts: a general phenomenon in dwarf novae

van Paradijs, J. **125**, L16

The eclipsing dwarf nova OY Carinae. I. Relative luminosities in quiescence and during a short eruption

Vogt, N. **128**, 29

The eclipsing dwarf nova OY Carinae. II. Spectroscopy and photometry during quiescence

Schoembs, R., Hartmann, K. **128**, 37

Dwarf Stars

Mg II and Ca II Emissions from Three G Dwarfs

Rego, M., Fernandez-Figueroa, M.J. **76**, 249

Theoretical Stellar Chromospheres of Late Type Stars. IV. Temperature Minima for Dwarf Stars

Schmitz, F., Ulmschneider, P. **84**, 93

Metal Abundances of F and G Dwarfs Determined by the Radial Velocity Scanner Coravel

Mayor, M. **87**, L1

"Solar Flares" on Neutron Stars and Degenerate Dwarfs

Tsygan, A.I. **87**, 224

Metal Enrichment in the Atmospheres of Extremely Metal-deficient Dwarf Stars by Accretion of Interstellar Matter

Yoshii, Y. **97**, 280

Theoretical Luminosity Functions of Red and Black Dwarfs

Staller, R.F.A., de Jong, T. **98**, 140

Smethells' Stars Nearer than 25 Parsecs

Gliese, W. **99**, 205; **44**, 131

Transition Region Structure in F Dwarfs

Saxner, M. **104**, 240

The Spectra of Late-type Dwarfs and Sub-dwarfs in the Near Ultraviolet. I. Line Identifications

Beckman, J.E., Crivellari, L., Selvelli, P.L. **106**, 380; **47**, 295

Dynamics, see Stellar Dynamics

Does the Binding Energy of Binaries Masquerade as Missing Mass?

Wesson, P.S. **90**, 1

Theoretical Multi-mass Models for Clusters of Galaxies

Capelato, H.V., Gerbal, D., Mathez, G., Mazure, A., Roland, J., Salvador-Solè, E. **96**, 235

Anisotropic models of elliptical galaxies. I. The case of circular isophotes

Bacon, R., Simien, F., Monnet, G. **128**, 405

Dynamo Theory

Magnetic Buoyancy Revisited: Analytical and Numerical Results for Rising Flux Tubes

Schüßler, M. **71**, 79

Non-linear Dynamo Theory: Finite Amplitude Magnetic Fields with Large Scale Circulation in a Compressible Stratified Medium

Schüßler, M. **72**, 348

Buoyant Magnetic Flux Tubes in Supergranules

Meyer, F., Simon, G.W., Weiss, N.O. **76**, 35

Dynamo Action of a Mean Flow Caused by Latitude-dependent Heat Transport

Belvedere, G., Paternò, L., Stix, M. **86**, 40

On Dynamos in the Cores of Magnetic Stars

Moss, D. **91**, 319

Magnetic Cycles of Lower Main Sequence Stars

Belvedere, G., Paternò, L., Stix, M. **91**, 328

The Solar Torsional Oscillation and Dynamo Models of the Solar Cycle

Schüssler, M. **94**, L17

Equations for Thin Flux Tubes in Ideal MHD

Spruit, H.C. **102**, 129

Stellar Dynamo and the Galactic X-ray Sources

Belvedere, G., Molteni, D. **102**, 283

Differential Rotation, Magnetic Activity and X-ray Emission of Late Type Giants

Belvedere, G., Chiuderi, C., Paternò, L. **105**, 133

The Structure of the Solar Magnetic Field Below the Photosphere.

I. Adiabatic Flux Tube Models

van Ballegooijen, A.A. **106**, 43

Stability of Toroidal Flux Tubes in Stars

Spruit, H.C., van Ballegooijen, A.A. **106**, 58

On the Generation of Magnetic Fields in Late-type Stars: A Local Time-dependent Dynamo Model

Robinson, R.D., Durney, B.R. **108**, 322

Erratum: Stability of Toroidal Flux Tubes in Stars

Spruit, H.C., van Ballegooijen, A.A. **113**, 350

Helicity and α -effect of simple convection cells

Stix, M. **118**, 363

Models of stellar differential rotation on the lower main sequence

Moss, D., Vilhu, O. **119**, 47

Early Type Stars, see also Be Stars, B Stars, Supergiants, Wolf Rayet Stars

Effects of Stellar Rotation in the near Ultraviolet Spectrum of Early Type Stars. Analysis of the Stellar Rotation Effects in the TD-1 A Satellite Observations

Llorente de Andrés, F., Morales Durán, C. **72**, 318

Resolution of the C IV + Fe III Blend at 1550 Å. II. The Predominance of C IV in Stars Hotter than B1

Barbier, R., Swings, J.P. **72**, 374

A Deep Objective Prism Survey of the Two Regions in the Large Magellanic Cloud for OB and Supergiant Stars

Davis Philip, A.G., Sanduleak, N. **72**, 379; **35**, 347

Line Driven Sound Waves in Early Type Stars

Martens, P.C.H. **75**, L7

- O Stars He II and H Lines in the 1μ Region
Vreux, J.M., Andriat, Y. **75**, 93
- The He λ 10830 Å Emission Line in O Star Spectra
Andriat, Y., Vreux, J.M. **76**, 221
- The Effective Temperatures of the O-Stars
Pottasch, S.R., Wesseli, P.R., Van Duinen, R.J. **77**, 189
- Spherical Extended Non-LTE Model Atmospheres of Low Gravity Subluminous O-stars
Gruschinske, J., Kudritzki, R.P. **77**, 341
- The UV Spectrum of the Possible Radio Star HD 26676
Stickland, D.J. **77**, 359
- Observations of the Mid-ultraviolet Spectrum of 138 Early Type Stars
Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **78**, 250; **38**, 227
- Apparent Spectral Inconsistencies Due to the Gravity Darkening of Pole-on Rapidly-rotating B-type Stars
Kodaira, K., Hoekstra, R. **78**, 292
- Ultraviolet P Cygni Profiles of the C IV Resonance Line for O-type Stars in the Open Cluster IC 1805
Burki, G., Llorente de Andr s, F. **79**, L13
- "Normal" Early Type Stars with an Anomalous Mid-ultraviolet Spectrum
Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **79**, 230
- A Quantitative Study of the Upper HR Diagram and a New Determination of the Local Initial Mass Function
Lequeux, J. **80**, 35
- Line Blocking in the Near Ultraviolet Spectrum of Early Type Stars II. The Dependence on Spectral Type and Luminosity for Normal Stars
Llorente de Andr s, F., Lamers, H.J.G.L.M., M ller, E.A. **80**, 330; **38**, 367
- Copernicus Observations of Neutral Helium Lines in Early-type Stars
Dufton, P.L., McKeith, C.D. **81**, 8
- UBV Photoelectric Measurements of O-B Stars in SA 98
Lunel, M., Garnier, R. **81**, 387; **39**, 7
- Observations of the Mid-ultraviolet Spectrum of Peculiar A and B Stars and of Be Stars, Bn Stars, and Shell Stars
Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **82**, 48
- The Evolution of Rotational Velocity in O Type Stars
Packet, W., Vanbeveren, D., De Gr ve, J.P., de Loore, C., Sreenivasan, S.R. **82**, 73
- Balmer-line Photometry of NGC 4755
Knoechel, G. **82**, 253
- Mass Loss from UW Canis Majoris
Drechsel, H., Rahe, J., Kondo, Y., McCluskey, G.E. Jr. **83**, 363
- Carbon, Nitrogen, and Oxygen Abundances in Loose Association and Field B-type Stars
Kane, L., McKeith, C.D., Dufton, P.L. **84**, 115
- The Expanding Envelope of Zeta Puppis: a Detailed UV-line Fit
Hamann, W.-R. **84**, 342
- An Analysis of the Hauck-Mermilliod Catalogue of Homogeneous Four-color Data, II.
Davis Philip, A.G., Egret, D. **85**, 266; **40**, 199
- Comparison Between the Observations and Evolutionary Calculations for Massive Close Binary Systems
Vanbeveren, D., Loore, C. de **86**, 21
- A Study of Early-type Stars in an Area in Puppis
Wramdemark, S. **86**, 64
- A Comment on the Nature of O-Type Runway Stars
Pawlowicz, L.M., Herbst, W. **86**, 68
- Optical Spectra of HDE 245770 = A 0535 + 26
Giangrande, A., Giovannelli, F., Bartolini, C., Guarnieri, A., Piccioni, A. **86**, 267; **40**, 289
- The Fundamental Physical Parameters of Main-sequence and Near Main-sequence B Type Stars as Derived from *uvby*, β Photometry
Sinnerstad, U. **86**, 270; **40**, 395
- A Study of Early-type Stars in Directions Close to the Carina ARM
Wramdemark, S. **87**, 253; **41**, 33
- Four-colour and H β Photometry for Early Type Stars in Three Southern Galactic Regions
Lod n, K., Lindblad, P.O., Schober, J., Urban, A. **87**, 254; **41**, 85
- SB 21, An Extremely Helium-rich Subdwarf O-star
Hunger, K., Kudritzki, R.P. **88**, L4
- Highly Ionized Species in the Spectra of Small Magellanic Cloud Stars
Pr vot, L., Laurent, C., Paul, J., Vidal-Madjar, A., Audouze, J., Ferlet, R., Lequeux, J., Mauch rat-Joubert, M., Pr vot-Burnichon, M.L., Rocca-Volmerange, B. **90**, L13
- Ultraviolet Observations of the Blue Halo Star: HD 93521
Ramella, M., Morossi, C., Santin, P. **90**, 146
- The Peculiar, Galactic Object ESO 313-N * 10
West, R.M. **90**, 366
- A Comparison Between the Observed and Predicted UV Line Blocking for Blanketed Model Atmospheres of Early Type Stars
Castelli, F., Lamers, H.J.G.L.M., Llorente de Andr s, F., M ller, E.A. **91**, 32
- The Possible Nature of the High-velocity OB Stars: Hot UV-bright Stars in the Galactic Disk
Carrasco, L., Bisiacchi, G.F., Cruz-Gonz lez, C., Firmani, C., Costero, R. **92**, 253
- A Study of Early-Type Stars in a Perseus Arm Area
Wramdemark, S. **95**, 210; **43**, 103
- A Theoretical Age and Mass Calibration of the Geneva Photometric System for Early-type Stars
North, P., Cramer, N. **97**, 416; **43**, 395
- The Distribution of Early-type Stars and Dust Around $l = 114^\circ$
Wramdemark, S. **99**, 204; **44**, 115
- uvby* Photometry of 210 B, A, and F Stars in Ten Areas Centered on Extragalactic Radio Sources at High Northern Galactic Latitudes
Knude, J. **99**, 402; **44**, 225
- Ultraviolet Intrinsic Colours of Early Type Stars
Llorente de Andr s, F., Morales, C., Ruiz del Arbol, J.A., P rez Moll , J. **100**, 138
- The Expanding Envelope of Tau Scorpii: A Detailed UV-line Fit
Hamann, W.-R. **100**, 169
- Spectral Types and Radial Velocities of Southern OB + Stars
Drilling, J.S., Perry, C.L. **102**, 281; **45**, 439
- Ultraviolet Colours of Early-type Stars
Barbier, R. **102**, 307
- Effective Temperatures, and Radii of Luminous O and B Stars: A Test for the Accuracy of the Model Atmospheres
Remie, H., Lamers, H.J.G.L.M. **105**, 85
- Wind Acceleration in Early-type Stars: The Momentum Problem and the Terminal Velocity
Panagia, N., Macchetto, F. **106**, 266
- Four-colour and H β Photometry for O-A0 type Stars in Three Regions Near the Galactic Equator
Westin, T.N.G. **112**, 180; **49**, 561

A study of visual double stars with early type primaries. I. Spectroscopic results

Gahm, G.F., Ahlin, P., Lindroos, K.P. **118**, 210; **51**, 143

Non-LTE analysis of subluminescent O-stars. V. The binary system HD 128220

Gruschinske, J., Hamann, W.-R., Kudritzki, R.-P., Simon, K.P., Kaufmann, J.P. **121**, 85

Biconical nebulae and early-type stars: a model for S 106

Dyson, J.E. **124**, 77

The bright stellar content of the giant galactic H II region NGC 3603

Moffat, A.F.J. **124**, 273

Non-LTE analysis of massive O stars. III. The O 3 stars HD 93128, HD 93129 A, and HDE 303308

Simon, K.P., Jonas, G., Kudritzki, R.P., Rahe, J. **125**, 34

Relaxation oscillations and double temperature structures in stellar coronae

Hearn, A.G., Kuin, N.P.M., Martens, P.C.H. **125**, 69

Studies of the Carina Nebula. V. The near infrared excess of O-type stars and the anomalous extinction law in their environment

Thé, P.S., Groot, M. **125**, 75

R 136: supermassive star or dense core of a star cluster?

Moffat, A.F.J., Seggewiss, W. **125**, 83

Determination of effective temperatures for hot stars from integrated fluxes

Tobin, W. **125**, 168

A Be type variation in an O star

Divan, L., Zorec, J., Andrillat, Y. **126**, L8

Radial velocities for early type stars in six galactic regions

Zentelis, N. **126**, 223; **53**, 445

The hydrodynamic motions of OB stars

Quiroga, R.J., Tarsia, R. **127**, 245

On the variability of θ Vel

Haefner, R., Wuensch, J. **127**, 413

Absolute dimensions of eclipsing binaries. II. The early-type semidetached system V Puppis

Andersen, J., Clausen, J.V., Giménez, A., Nordström, B. **128**, 17

Observed and computed spectral distribution of early-type stars.

II. Determination of T_e for B5-A0 stars

Malagnini, M.L., Faraggiana, R., Morossi, C. **128**, 375

Earth

On a Day-time Ionospheric Effect on some Radio Intensity Measurements and Interferometry

Meyer-Vernet, N. **84**, 142

Luni Solar Nutation Tables and the Liquid Core of the Earth

Melchior, P. **87**, 365

Comparison Between Two Trigonometric Models for the Long-period Variations in the Wolf Numbers and in the Length of Day

Picchio, G. **111**, 326

A Comparative Spectral Analysis of the Earth's Rotation and the Solar Activity

Carta, F., Chistovsky, F., Manara, A., Mazzoleni, F. **114**, 388

Short-period geomagnetic, atmospheric and Earth-rotation variations

Djurović, D. **118**, 26

The planar inverse problem with four monoparametric families of curves

Xanthopoulos, B.C., Bozis, G. **122**, 251

Earth Atmosphere, see also Seeing

Atmosphere Transparency and Infrared Astronomy at the Gornegrat

Bensammar, S. **72**, 186

Solar Pulsations and Angular Coherence of Atmospheric Transparency Fluctuations

Grec, G., Fossat, E., Brandt, P., Deubner, F.L. **77**, 347

Calculation of Pseudo Solar Narrow Band Oscillations Produced by Atmospheric Differential Extinction

Grec, G., Fossat, E. **77**, 351

Turbulence around a Solar Telescope as Deduced from Angle of Arrival Statistics. A Comparison with Microthermal Measurements

Borgnino, J., Azouit, M., Barletti, R., Ceppatelli, G., Paternò, L., Righini, A., Speroni, N., Vernin, J. **79**, 184

Uniform Transformations and Extinction Variations for the UVB System

Haug, U. **84**, 23

Stellar Chopping Photometry in Auroral Regions

Myrabo, H.K. **84**, 297

Detection of 160-MIN Solar Oscillations and Atmospheric Extinction

Severny, A.B., Kotov, V.A., Tsap, T.T. **88**, 317

Atmospheric Limitations of Narrow-field Optical Astrometry

Lindegren, L. **89**, 41

Radio Continuum Mapping Technique at Low Elevations, as Illustrated by Application to the Southern Part of Loop IV

Reich, W., Steffen, P. **93**, 27

Refraction in a Piecewise Polytopic Atmosphere

Mikkola, S. **94**, 20

Power Spectrum of Differential Refraction and Comparison with Solar Diameter Fluctuation Measurements

Fossat, E., Grec, G., Harvey, J.W. **94**, 95

Measurement of Excess Radio Transmission Length on Earth-space Paths

Hogg, D.C., Guiraud, F.O., Decker, M.T. **95**, 304

Solar Activity and Earth's Rotation

Djurović, D. **100**, 156

Lower Atmosphere and Solar Seeing: an Experiment of Simultaneous Measurements of Nearby Turbulence by Thermal Radiosondes, by Angle of Arrival Statistics and Image Motion Observation

Borgnino, J., Ceppatelli, G., Ricort, G., Righini, A. **107**, 333

The influence of ionospheric refraction on radio astronomy interferometry

Spoelstra, T.A.T. **120**, 313

Eclipse, see Solar Eclipse

Results of the PHEMU79 Observation Campaign of Mutual Phenomena of the Galilean Satellites of Jupiter in 1979 (Text in French)

Arlot, J.-E., Bernard, A., Bouchet, P., Daguillon, J., Dourneau, G., Figer, A., Helmer, G., Lecacheux, J., Merlin, Ph., Meyer, C. **111**, 151

Two Colour Photometry and Polarimetry of the Solar Corona of 16 February 1980

Dürst, J. **112**, 241

The electron density of faint prominences observed during the solar eclipse of July 31, 1981

Koutchmy, S., Lebecq, C., Stellmacher, G. **119**, 261

- Eclipsing Binaries**, see also Close Binaries, RS Canum Venaticorum Stars, VV Cephei Stars, W Ursae Majoris Stars
- Photoelectric Photometry of the Eclipsing Binary BS Vul
Bernardi, C. de, Scaltriti, F. **71**, 270; **35**, 63
- RY Scuti - A Beta Lyrae System?
King, A.R., Jameson, R.F. **71**, 326
- Four-colour Photometry of Eclipsing Binaries. XIIb. TV Cet, Light Curves, Photometric Elements, and Determination of Helium Content
Jørgensen, H.E. **72**, 356
- Four-colour Photometry of Eclipsing Binaries. XXI A: TV Cet, Photometric Observations
Jørgensen, H.E. **72**, 378; **35**, 277
- Photometric Observations of the Algol Variable TV Cassiopeiae
Walter, K. **72**, 378; **35**, 281
- VBLUW Photometry of the Symbiotic High-latitude, Eclipsing System V 748 Cen (= Cen X-4?)
van Genderen, A.M. **73**, 183
- A Photometric Analysis of V 539 Ara
Clausen, J.V. **73**, 365; **36**, 45
- Two-Colour Photometry of Eclipsing Binary BS Dra
Güdü, N., Gülmen, Ö., İbanoglu, C., Bozkurt, S. **73**, 365; **36**, 65
- Revised Photometric Elements of Seven R CMa Systems
Cester, B., Giuricin, G., Mardirossian, F., Mezzetti, M., Milano, L. **73**, 369; **36**, 273
- Photoelectric Observations of the Eclipsing Binary RT And
Mancuso, S., Milano, L., Russo, G. **75**, 261; **36**, 415
- Orbital Elements and Dimensions of Eclipsing Binary AI Phe
Imbert, M. **75**, 261; **36**, 453
- The Ultraviolet Spectrum of the Eclipsing Binary Epsilon Aurigae
Hack, M., Selvelli, P.L. **75**, 316
- The Physical Parameters of WZ Sge. II. Eclipse Analysis
Ritter, H., Schröder, R. **76**, 168
- Light Curves and Elements of AR Draconis
Brogli, P., Conconi, P. **76**, 368; **37**, 487
- Revised Photometric Elements of the Eclipsing Binaries IU Aur and δ Lib
Giuricin, G., Mardirossian, F., Mezzetti, M., Cester, B. **76**, 369; **37**, 513
- On the Eclipsing Binaries of the Ursa Major Stream
Giannuzzi, M.A. **77**, 214
- Three-colour Photoelectric Observations of RT And
Mancuso, S., Milano, L., Russo, G., Sollazzo, C. **78**, 250; **38**, 187
- Minimum Projection in Eccentric Binary Orbits
Mammano, A. **79**, 204
- Photometric Elements of the Eclipsing Binary LT Her
Giuricin, G., Mardirossian, F., Mezzetti, M., Predolin, F., Cester, B. **79**, 354
- Two-colour Photometry of the Eclipsing Binary IU Aur
Pettersen, B.R. **80**, 265
- Interpretation of New BVR Lightcurves of u Herculis
Provoost, P. **81**, 17
- Narrow-band Photometry of β Lyrae in 1971
Scarfe, C.D. **81**, 388; **39**, 23
- Two-colour Photoelectric Lightcurves and Elements of WW Dra
Mardirossian, F., Mezzetti, M., Cester, B., Giuricin, G. **81**, 388; **39**, 73
- Photoelectric Observations of the Long-period Eclipsing System AZ Cassiopeiae
Tempesti, P. **81**, 389; **39**, 115
- An Instructive Case of Period Determination: The Eclipsing Spectroscopic Binary Star HR 9049 (HD 224113)
Burki, G., Rufener, F. **81**, 389; **39**, 121
- Photometric Elements of the Eclipsing Binary OX Cas
Mardirossian, F., Mezzetti, M., Predolin, F., Giuricin, G. **82**, 386
- Revised Photometric Elements of Five Possible SD-D Systems
Mardirossian, F., Mezzetti, M., Cester, B., Giuricin, G., Russo, G. **82**, 394; **39**, 235
- Revised Photometric Elements of Eight Detached Systems
Giuricin, G., Mardirossian, F., Mezzetti, M. **82**, 395; **39**, 255
- Revised Photometric Elements of Eight SD-systems
Mezzetti, M., Cester, B., Giuricin, G., Mardirossian, F. **82**, 395; **39**, 265
- Revised Photometric Elements of Nine SD-systems
Mezzetti, M., Cester, B., Giuricin, G., Mardirossian, F. **82**, 395; **39**, 273
- Dual Aspect of the Wavelength-dependent Fluctuations of ϵ Aurigae
Canavaggia, R. **83**, 105
- Four-colour Photometry of Eclipsing Binaries. XIA. Photometric Elements, Absolute Dimensions, and Helium Abundance of RS Chamaeleontis
Clausen, J.V., Nordström, B. **83**, 339
- Infrared Observations of Binary Stars. II
Needham, J.D., Phillips, J.P., Selby, M.J., Sanchez Magro, C. **83**, 370
- Revised Photometric Elements of Ten Semidetached Systems
Mardirossian, F., Mezzetti, M., Predolin, F., Giuricin, G. **84**, 268; **40**, 57
- Two-colour Photoelectric Observations of the Eclipsing Binary BB Peg
Cerruti-Sola, M., Scaltriti, F. **84**, 269; **40**, 85
- Revised Photometric Elements of the Detached Eclipsing Binaries RS Cha, RZ Cha, and HS Hya
Giuricin, G., Mardirossian, F., Mezzetti, M., Predolin, F. **85**, 259
- Perturbations dans les courbes de lumière de U Cephei et calcul des éléments
Brogli, P., Conconi, P. **85**, 265; **40**, 135
- Two Colour Photometry of the Eclipsing Binary CD Tauri
Gülmen, Ö., İbanoglu, C., Güdü, N., Bozkurt, S. **85**, 265; **40**, 145
- Photoelectric Observations of the Variable Star AU Monocerotis
Lorenzi, L. **85**, 267; **40**, 271
- Mathematical Analysis of Some Photometric Peculiarities of AU Monocerotis
Lorenzi, L. **85**, 342
- SZ Cam: A Semi-detached Binary System?
Mardirossian, F., Mezzetti, M., Predolin, F., Giuricin, G. **86**, 264
- M1-2, a Possible Eclipsing Binary Planetary Nebula Central Star
Drummond, J.D. **88**, L11
- Photoelectric UVB Light Curves of the Eclipsing Binary RY Scuti
Ciatti, F., Mammano, A., Margoni, R., Milano, L., Strazzulla, G., Vittone, A. **88**, 282; **41**, 143
- J, K, L, Infrared Observations of RZ Scutum
Akinci, R., Jameson, R.F. **88**, 320
- Geometry and Dynamics of the Algol System
Söderhjelm, S. **89**, 100
- A Polarimetric Study of U Cephei. Part I
Pirola, V. **90**, 48

- UBV Photometry of HZ Herculis: the Shape of the Primary Minimum**
 Kippenhahn, R., Schmidt, H.U., Thomas, H.-C. **90**, 54
- New Photoelectric Observations of the Wolf-Rayet Star HD 5980 in the Small Magellanic Cloud**
 Breysacher, J., Perrier, C. **90**, 207
- Revised Photometric Elements of the Eclipsing Binary DI Peg**
 Mardirossian, F., Predolin, F., Giuricin, G. **91**, 254
- Revised Photometric Elements of Eight Eclipsing Binaries**
 Mezzetti, M., Predolin, F., Giuricin, G., Mardirossian, F. **91**, 261; **42**, 15
- 1977-78 and 1978-79 Photoelectric Light Curves of the RS CVn-Type Binaries VV Mon, RU Cnc and CQ Aur**
 Cerruti-Sola, M., Scaltriti, F., Blanco, C., Catalano, S., Marilli, E., Rodonò, M., Strazzulla, G., Chambliss, C.R. **91**, 381; **42**, 245
- Comments on Gas Stream Effects in Typical Algol Systems**
 Walter, K. **92**, 86
- A Photometric Study of the Eclipsing Binary RX Hercules**
 Jeffreys, K.W. **92**, 323; **42**, 285
- The Eclipsing Dwarf Nova OY Carinae: Ephemeris and Physical Parameters**
 Vogt, N., Schoembs, R., Krzeminski, W., Pedersen, H. **94**, L29
- Photometric Elements of the Eclipsing Binary FZ Cma**
 Giuricin, G., Mardirossian, F. **94**, 201
- Photometric Elements of the Eclipsing Binary TZ Men**
 Giuricin, G., Mardirossian, F. **94**, 204
- A Model for 4 U 1700-37**
 Brinkmann, W. **94**, 323
- Spectroscopic Observations of VV Cep. II. The Egress Phase of the 1976/78 Eclipse**
 Möllenhoff, C., Schaifers, K. **94**, 333
- YY CMi: An Evolved Contact Binary System?**
 Giuricin, G., Mardirossian, F. **94**, 391
- Photometry Observations and Light Curve Analysis of the Peculiar System ER Vulpeculae**
 Al-Naimiy, H.M.K. **95**, 209; **43**, 85
- Four-colour Photometry of Eclipsing Binaries, XIII B: Light-curves of TY Pyxidis**
 Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **95**, 210; **43**, 141
- Progress on a Quantitative Model for Beta Lyrae**
 Wilson, R.E., Lapasset, E. **95**, 328
- Revised Photometric Elements of Seven SD-Systems**
 Giuricin, G., Mardirossian, F., Predolin, F. **95**, 395; **32**, 251
- Infrared Light Curves of the Contact Binary 44i Bootis**
 Bergeat, J., Van't Veer, F., Lunel, M., Garnier, R., Sibille, F., Roux, S. **95**, 395; **43**, 257
- A Comparison of Eclipsing Binary Models. Application to RT UMi**
 Milano, L., Russo, G., Sollazzo, C. **96**, 328
- Revised Photometric Elements of the Eclipsing Binary BR Cyg**
 Giuricin, G., Mardirossian, F. **96**, 409
- Revised Photometric Elements of the Eclipsing Binary XZ CMi**
 Mardirossian, F., Giuricin, G. **96**, 415
- Gas Streaming in Semi-detached Binary Systems**
 van Houten, C.J. **97**, 46
- Revised Photometric Elements of the Eclipsing Binary RT UMi**
 Mardirossian, F., Giuricin, G. **97**, 206
- Photometric Elements of the Eclipsing Binary HU Tau**
 Giuricin, G., Mardirossian, F. **97**, 410
- Phase-dependent Optical and Ultraviolet Observations of the Old Nova V 603 Aquilae (1918)**
 Drechsel, H., Rahe, J., Holm, A., Krautter, J. **99**, 166
- Photometric Elements of the Eclipsing Binary TY Pup**
 Giuricin, G., Mardirossian, F. **99**, 182
- The Ultraviolet Spectrum of the Eclipsing Binary Zeta Aurigae**
 Hack, M. **99**, 185
- Photometric Orbit of the Massive System RY Scuti**
 Milano, L., Vittone, A., Ciatti, F., Mammano, A., Margoni, R., Strazzulla, G. **100**, 59
- A Polarimetric Study of U Cephei. Part II (Observations)**
 Pirola, R. **100**, 334; **44**, 461
- Four-colour Photometry of Eclipsing Binaries, XIII A. Photometric Elements and Absolute Dimensions of TY Pyxidis**
 Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **101**, 7
- A Lightcurve Analysis for the Massive Binary RY Sct**
 Giuricin, G., Mardirossian, F. **101**, 138
- The X-ray Modulation of Cygnus X-3**
 Bonnet-Bidaud, J.M., van der Klis, M. **101**, 299
- Variations in the Light Curve of V 505 Sagittarii and their Interpretation**
 Walter, K. **101**, 369
- Revised Photometric Data for Nine Eclipsing Binaries**
 Giuricin, G., Mardirossian, F. **101**, 418; **45**, 85
- Statistical Models for Spectroscopic and for Eclipsing Binary Stars**
 Halbwachs, J.L. **102**, 191
- Revised Photometric Elements of Five Eclipsing Binaries**
 Giuricin, G., Mardirossian, F. **102**, 282; **45**, 499
- The Variable Lightcurves of RT Andromedae**
 Milano, L., Russo, G., Mancuso, S. **103**, 57
- WY Hya: a Main Sequence Detached Binary System with Nearly Equal Members**
 Giuricin, G., Mardirossian, F., Mezzetti, M. **103**, 349
- Simultaneous Photoelectric and Single-trail Spectroscopic Observations of V 471 Tauri (BD + 16° 516)**
 Hamzaoglu, E. **104**, 65
- Photometry and Elements of GW Geminorum**
 Broglia, P., Conconi, P. **104**, 170; **46**, 185
- Photometric Observations of the Algol Variable V 505 Sagittarii**
 Walter, K. **104**, 171; **46**, 263
- On the Period of the Interacting Binary UW Canis Majoris**
 Herczeg, T., Drechsel, H., Rahe, J. **104**, 256
- Photoelectric Photometry of the Eclipsing Binary V 338 Cephei**
 Gieseke, F. **106**, 179; **46**, 365
- Revised Photometric Elements of the Eclipsing Binary EE Aquarii**
 Russo, G., Sollazzo, C. **107**, 197
- The Variable Light Curve of BH Virginis**
 Hoffmann, M. **107**, 415; **47**, 561
- The Visual Double W UMa Binary BV and BW Draconis**
 Geyer, E.H., Hoffmann, M., Karimie, M.T. **108**, 416; **48**, 85
- Evidence for a Third Component in the U CrB System**
 Van Gent, R.H. **110**, 183; **48**, 457
- Revised Photometric Data for Six Eclipsing Binaries**
 Giuricin, G., Mardirossian, F., Mezzetti, M. **111**, 210; **49**, 89
- Determination of Parameters of W UMa Systems. III: CC Com, YY Eri, V502 Oph and TY Pup**
 Maceroni, C., Milano, L., Russo, G. **111**, 212; **49**, 123
- Three-colour Photoelectric Observations of the Eclipsing Binary TT Her**
 Burchi, R., Dipaolantonio, A., Mancuso, S., Milano, L., Vittone, A. **111**, 212; **49**, 129
- VBLUW Photometry of RZ Oph (BD + 7° 3832): Eclipse of the Accretion Disk**
 van Paradijs, J., van der Woerd, H., van der Bij, M., Lee Van Suu, A. **111**, 372

- Four-colour Photometry of Eclipsing Binaries, XIVB: Lightcurves of QX Carinae
Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **112**, 180; **49**, 571
- AN And: A Detached Eclipsing Binary System with an Am Primary Member
Giuricin, G., Mardirossian, F., Mezzetti, M. **114**, 74
- A Study of Ultraviolet Spectra of ζ Aur/VV Cep Systems. I. Resonance Line Formation
Hempe, K. **115**, 133
- A Photometric Study of the Eclipsing Binary V 889 Aql: An Example of Relativistic Apsidal Motion
Giménez, A., Scaltriti, F. **115**, 321
- Photoelectric photometry of the eclipsing binary NN Cephei
Güdür, N., Gülmen, Ö., Sezer, C., Sengonca, H. **118**, 208; **51**, 27
- Normalized photoelectric observations for a three-dimensional representation of the light changes of RS Canum Venaticorum
Lorenzi, L., Lattanzi, A., Siciliano, F. **118**, 209; **51**, 77
- Seasonal light curves of TY UMa: observations and solutions
Brogia, P., Conconi, P. **118**, 209; **51**, 97
- A multicolour photometric analysis of the eclipsing binary VV Ori
Giuricin, G., Mardirossian, F., Mezzetti, M., Chambliss, C.R. **118**, 209; **51**, 111
- Spectroscopic observations of eclipsing binaries. V. Accurate mass determination for the B-type systems V539 Arae and ζ Phoenicis
Andersen, J. **118**, 255
- EX Hydrae: a coordinated campaign of photoelectric photometry from four observatories
Sterken, C., Vogt, N., Freeth, R., Kennedy, H.D., Marino, B.F., Page, A.A., Walker, W.S.G. **118**, 325
- The period distribution of eclipsing binary systems
Giuricin, G., Mardirossian, F., Mezzetti, M. **119**, 218
- VBLUW photometry of the high-latitude, eclipsing system BL Tel
van Genderen, A.M. **119**, 265
- Infrared photometry of the RS CVn binaries. I. TY Pyxidis
Antonopoulou, E. **120**, 85
- The early B-type eclipsing binary FZ CMa (HD 52942): a massive triple system
Moffat, A.F.J., Vogt, N., Vaz, L.P.R., Grønbech, B. **120**, 278
- Statistics of binary stars: eclipse depths
Giuricin, G., Mardirossian, F., Mezzetti, M. **121**, 42
- Light curves of four southern bright hitherto unknown eclipsing binaries
Waelkens, C., Rufener, F. **121**, 162; **52**, 13
- Absolute dimensions of eclipsing binaries. I. The early-type detached system QX Carinae
Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **121**, 271
- TV Cassiopeiae in the Utrecht photometric system
de Landtsheer, A.C. **121**, 329; **52**, 213
- Four-colour photometry of eclipsing binaries. XV B: light curves of V Puppis
Clausen, J.V., Nordström, B., Reipurth, B. **121**, 332; **52**, 323
- The β Cephei eclipsing binary system 16 Lacertae
Garrido, R., Sareyan, J.-P., Gimenez, A., Valtier, J.-C., Delgado, A.J., le Contel, J.-M., Ducatel, D. **122**, 193
- Ultraviolet observations of AR Lacertae
Kızıloğlu, Ü., Derman, E., Ögelman, H., Tokdemir, F. **123**, 17
- Photometric observations of AC Boo
Schieven, G., Morton, J.C., McLean, B.J., Hughes, V.A. **123**, 360; **52**, 463
- YZ Cassiopeiae and the Utrecht photometric system
de Landtsheer, A.C. **124**, 155; **53**, 161
- Mass transfer in close binary systems: original and remnant masses
Giuricin, G., Mardirossian, F., Mezzetti, M. **125**, 388
- The possible long-period eclipsing binary BM Eri
Ahlin, P., Sundman, A. **125**, 391
- Mg II profile variations of Zeta Aurigae
Ahmad, I.A., Chapman, R.D., Kondo, Y. **126**, L5
- Photometric observations and elements of the eclipsing binary TT Herculis
Kwee, K.K., van Genderen, A.M. **126**, 94
- Infrared photometry of the RS CVn binaries. III. JHK light curves of UV Psc
Antonopoulou, E. **126**, 221; **53**, 347
- A photometric study of the eclipsing binary V478 Cygni
Sezer, C., Güdür, N., Gülmen, Ö., Sengonca, H. **126**, 221; **53**, 363
- Four-colour photometry of eclipsing binaries. XVI. Light curves of VV Pyxidis
Clausen, J.V., Nordström, B. **127**, 425; **54**, 149
- Four-colour photometry of eclipsing binaries. XVII. Light curves of DM Virginis
Andersen, J., Clausen, J.V., Nordström, B. **127**, 425; **54**, 161
- Absolute dimensions of eclipsing binaries. II. The early-type semidetached system V Puppis
Andersen, J., Clausen, J.V., Giménez, A., Nordström, B. **128**, 17
- The eclipsing dwarf nova OY Carinae. I. Relative luminosities in quiescence and during a short eruption
Vogt, N. **128**, 29
- Photometric observations and analysis of the eclipsing binary DM Persei
Sezer, C. **128**, 260; **54**, 193
- Statistics of categorized eclipsing binary systems. Lightcurve shapes, periods, and spectral types
Giuricin, G., Mardirossian, F., Mezzetti, M. **128**, 260; **54**, 211
- Four-colour photometry of eclipsing binaries. XVIII. Lightcurves of PV Puppis
Reipurth, B., Clausen, J.V., Nordström, B. **128**, 261; **54**, 301
- Element Abundances**, see Abundances
- A Supernova in NGC 1199
Laques, P., Nieto, J.-L., Vidal, J.-L., Augé, A., Despiaud, R. **93**, 53
- Element Formation**, see Nuclear Reactions, Nucleosynthesis
- Elliptical Galaxies**, see also Galaxies
- The Angular Size of Elliptical Galaxies
Frandsen, S., Thomsen, B. **72**, 111
- Radio Observations of NGC 3665: An Elliptical Galaxy with a Dust Lane
Kotanyi, C.G. **74**, 156
- The H I Content of the Elliptical Galaxies NGC 2974, NGC 4105, and NGC 5846
Bottinelli, L., Gougouenheim, L. **74**, 172
- Galaxy Collisions and Their Influence on the Dynamics and Evolution of Groups and Clusters of Galaxies
Roos, N., Norman, C.A. **76**, 75
- The Large-scale Distribution of Neutral Hydrogen in the Elliptical Galaxy NGC 3962
Bottinelli, L., Gougouenheim, L. **76**, 176
- On the Variation of Ellipticity with Radius in Elliptical Galaxies
di Tullio, G.A. **76**, 370; **37**, 591

Ellipticity and Twisting of Isophotes in Elliptical Galaxies

Bertola, F., Galletta, G. **77**, 363

A Correlation Between Isophotal Twisting and Flattening in Elliptical Galaxies

Galletta, G. **81**, 179

On the Intrinsic Shape of Elliptical Galaxies

Binggeli, B. **82**, 289

The Orientation of Radiosources Associated with Elliptical Galaxies

Battistini, P., Bònoli, F., Silvestro, S., Fanti, R., Gioia, I.M., Giovannini, G. **85**, 101

Neutral Hydrogen in the Field of the Elliptical Galaxy NGC 1052

Bottinelli, L., Gouguenheim, L. **88**, 108

Population Synthesis of Giant Ellipticals. A Composite Approach

Alvarez-Falcon, J.M. **89**, 291

On the M/L Ratios in Elliptical Galaxies

Michard, R. **91**, 122

La relation diamètre-luminosité pour les galaxies elliptiques et lenticulaires

Bigay, J.H., Paturel, G. **91**, 262; **42**, 69

The Ultraviolet Spectrum of the Normal Giant Elliptical NGC 4472

Norgaard-Nielsen, H.U., Kjaergaard, P. **93**, 290

Metallicity and Dynamical Parameters for Spheroidal and Elliptical Galaxies

Vigroux, L., Chièze, J.P., Lazareff, B. **98**, 119

The Equilibrium and Bifurcation of Rotating Stellar Systems

Wiegandt, R. **105**, 326

Influence of Ellipticity on Photometric Profiles of Elliptical Galaxies

Nieto, J.L. **107**, 415; **47**, 535

Periodic Orbits in Triaxial Galactic Models

Magnenat, P. **108**, 89

Rotation of the Dust Lane in NGC 1947

Möllenhoff, C. **108**, 130

On the Relation Between True and Apparent Flattenings of Elliptical Galaxies

Scufraire, R. **111**, 371

21 cm Line Observations of cD Galaxies

Valentijn, E.A., Giovanelli, R. **114**, 208

Absolute Ultraviolet Fluxes of Elliptical Galaxies as Observed with the Astronomical Netherlands Satellite (ANS)

de Boer, K.S. **115**, 218; **50**, 247

On the methods for determining galaxy velocity dispersions

Larsen, N., Norgaard-Nielsen, H.U., Kjaergaard, P., Dickens, R.J. **117**, 257

Calibrated B, V surface photometry of X-ray cD galaxies

Valentijn, E.A. **118**, 123

Further statistics on the M/L ratios in early-type galaxies

Michard, R. **121**, 313

The elliptical galaxy NGC 4696: CCD observations of an absorbing lane

Jorgensen, H.E., Norgaard-Nielsen, H.U., Pedersen, H., Rasmussen, I.L., Schnopper, H. **122**, 301

The distribution of violently relaxed matter in galaxies

Rephaeli, Y. **123**, 98

Periodic orbits in elliptical galaxies

Davoust, E. **125**, 101

High-resolution optical observations of NGC 3379. I. An analysis of previous data

Nieto, J.-L. **125**, 176; **53**, 247

The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. II. The fuelling of radio sources

Valentijn, E.A., Bijleveld, W. **125**, 223

The tensor virial theorem for subsystems

Brosche, P., Caimmi, R., Secco, L. **125**, 338

Radio continuum emission of nearby elliptical galaxies: statistical properties

Hummel, E., Kotanyi, C.G., Ekers, R.D. **127**, 205

Anisotropic models of elliptical galaxies. I. The case of circular isophotes

Bacon, R., Simien, F., Monnet, G. **128**, 405

Emission Line Stars, see also Be Stars, Herbig Haro Objects, Wolf Rayet Stars, X-ray BinariesThe Ultraviolet Spectrum and Expansion Velocity of η Carinae from IUE Observations

Cassatella, A., Giangrande, A., Viotti, R. **71**, L9

More on the Spectrum of the Peculiar Emission-line Object RX Puppis

Klutzn, M. **73**, 244

On the Interpretation of the Large Variations in the Line Positions in SS 433

Milgrom, M. **76**, L3

Is There a Second Set of Shifted Lines in SS 433?

Amitai-Milchgrub, A., Shaham, J. **77**, L7

Spectroscopic Observations of WRA 977. Line Identifications and Interstellar Features

Bord, D.J. **77**, 309

Conditions around the Large Magellanic Cloud Emission Line Star S22

Friedjung, M., Muratorio, G. **85**, 233

Spectroscopy of the Small Magellanic Cloud Emission Line Star HEN S 18

Azzopardi, M., Breysacher, J., Muratorio, G. **95**, 191

Comparison of the Spectrophotometric Data of Two FeII Emission Line Stars

Muratorio, G. **95**, 210; **43**, 111

Multichannel Spectrophotometry of Peculiar Emission-line Objects with Infrared Excess

Swings, J.P. **97**, 415; **43**, 331

The Strongly Polarized P Cygni Star with Infrared Excess CPD-52° 9243

Swings, J.P. **98**, 112

Discoveries on Southern, Red Sensitive Objective-prism Plates III: New Stars Having H α in Emission

MacConnell, D.J. **100**, 333; **44**, 387

Spectroscopic Study of the Infrared Ca II Triplet in S-type Mira Variable Stars

Contadakis, M.E., Solf, J. **101**, 241

A Catalogue of Observations in H α

Ducati, J.R. **101**, 420; **45**, 119

Image Tube Spectroscopic Studies of Rapid Variables. IV. Spectroscopic and Photometric Observations of AE Aquarii

Chincarini, G., Walker, M.F. **104**, 24

Discoveries on Southern, Red-sensitive Objective-prism Plates. IV. Extension to Higher Latitudes

MacConnell, D.J. **110**, 181; **48**, 355

On the nature of the (intermittent?) emission line star LkH₃₂₄

Chavarria-K., C., Finkenzeller, U., Appenzeller, I., de Lara, E., Cardona, O. **118**, 189

The LMC emission line star S22 (=HD 34664). III. Ultraviolet to infrared energy distribution

Bensammar, S., Friedjung, M., Muratorio, G., Viotti, R. **126**, 427

Emission Lines

Mg II and Ca II Emissions from Three G Dwarfs

Rego, M., Fernandez-Figueroa, M.J. **76**, 249

Thomson Scattered Lines in the Spectrum of SS 433. A Powerful Tool for Studying the System

Milgrom, M. **78**, L17

Analysis of the Far-ultraviolet Silicon Lines in G Dwarf

Fernandez-Figueroa, M.J., Rego, M., Cornide, M. **82**, 221

Solar Limb Emission Lines near Ca II H & K and Their Spatial Intensity Variations

Rutten, R.J., Stencel, R.E. **83**, 384; **39**, 415

Paschen Lines in Be Stars. II. Study of Paschen Emission Lines

Briot, D. **103**, 5

Erratum: Paschen Lines in Be Stars. II. Study of Paschen Emission Lines

Briot, D. **105**, 422

The Ca II K emission from the Sun as a star. I. Observational parameters

Oranje, B.J. **122**, 88

ESO 438-G 9: a Seyfert galaxy with unusual properties

Kollatschny, W., Fricke, K.J. **125**, 276

Accretion disks in Seyfert nuclei: broad line profiles and asymmetries

van Groningen, E. **126**, 363

On the line profile coefficient for stimulated emission

Cooper, J., Hubený, I., Oxenius, J. **127**, 224

Mass flow rates in quasars

Allan, P.M. **127**, 254

Energy Levels

Energy Levels in Debye Field

Barcza, S. **72**, 26

Atomic Structure Calculations: Energy Levels and Oscillator Strengths for $3s-3p$ and $3p-3d$ Transitions in Nickel XII to XV and Vanadium VII to X Spectra

Bromage, G.E. **87**, 253; **41**, 79

On the $2s^2S-2p^2P^0$ Resonance Lines of O VI and the $2s^2S_0-2s^2P_1$ Intercombination Line of O V

Brown, C.M. **88**, 273

On the line profile coefficient for stimulated emission

Cooper, J., Hubený, I., Oxenius, J. **127**, 224

Energy Spectra

Studies of the Carina Nebula. III. The Spectral Energy Distribution of the Very Hot and Massive Star HD 93250

Thé, P.S., Tjin A Djie, H.R.E., Kudritzki, R.P., Wesselius, P.R. **91**, 360

Energy Transfer

On Hot Star Winds. I. Radiation-driven Winds

Leroy, M., Lafon, J.-P.J. **106**, 345

On Hot Star Winds. II. Energy Transport - Corona-like Temperature Enhancements

Leroy, M., Lafon, J.-P.J. **106**, 358

Envelopes, see Cataclysmic Variables, Circumstellar Matter, Mass Loss, P Cygni Stars, Protostars, Shell Stars, YY Orionis Stars

Influence of the Envelope in the Variations of Transitory Type Be Stars

Peton, A. **101**, 96

Ephemerides

The Rigorous Treatment of Stellar Aberration and Doppler Shift, and the Barycentric Motion of the Earth

Stumpff, P. **78**, 229

Computation of Planetary Orbits Using Chebychev Polynomials

Rocher, P. **82**, 362

Two Self-consistent Fortran Subroutines for the Computation of the Earth's Motion

Stumpff, P. **87**, 252; **41**, 1

Catalogue of Eclipses of Jupiter's Galilean Satellites, 1610-2000

Lieske, J.H. **99**, 402; **44**, 209

Two Differing Definitions of the Dynamical Equinox and the Mean Obliquity

Standish, E.M., Jr. **101**, L17

The Motion of the Earth-Moon System Between 1700 and 2100 in Newcomb's Theory and in JPL-Ephemerides

Stumpff, P. **101**, 52

Astrolabe Observations of Mars

Standish, E.M., Débarbat, S., Sanchez, M. **102**, 371

Determination of the Equinox and Equator of the FK5

Fricke, W. **107**, L13

Improved Orbital Elements for Periodic Comet Schorr (1918 III)

de Vegt, C., Kohoutek, L., Marsden, B.G. **114**, 147

Orientation of the JPL Ephemerides, DE 200/LE 200, to the Dynamical Equinox of J 2000

Standish, E.M., Jr. **114**, 297

Comparison with observations and ephemeris of Phoebe (text in French)

Bec-Borsenberger, A., Rocher, P. **117**, 171; **50**, 423

Jupiter's satellites J VI and J VII. Ephemerides for the years 1981 to 1990

Rocher, P. **121**, 332; **52**, 333

DE 102: a numerically integrated ephemeris of the Moon and planets spanning forty-four centuries

Newhall, X.X., Standish, E.M. Jr., Williams, J.G. **125**, 150

Theory of the phenomena of Jupiter's Galilean satellites (Text in French)

Thuillot, W. **127**, 63

New ephemerides for the Sun, the Moon, and the planets (Text in French)

Francou, G., Bergeal, L., Chapront, J., Morando, B. **128**, 124

Equation of State

Thermodynamic Properties and Equations of State for Hydrogen and Helium in Stellar Conditions

Magni, G., Mazzitelli, I. **72**, 134

An Analytical Version of the Free-energy-minimization Method for the Equation of State of Stellar Plasmas

Däppen, W. **91**, 212

A New Equation of State of Supernova Matter

El Eid, M.F., Hillebrandt, W. **91**, 381; **42**, 215

Uncertainty in the Saturation Density of Nuclear Matter and Neutron Star Models

Haensel, P., Kutschera, M., Prószyński, M. **102**, 299

Hydrogen at high pressures and temperatures

Robnik, M., Kundt, W. **120**, 227

Influence of the equations of state and of the Z value on the solar five-minute oscillation

Shibahashi, H., Noels, A., Gabriel, M. **123**, 283

Acoustic waves in early-type stars. I. An efficient method for the computation of thermodynamic quantities in time-dependent stellar atmosphere calculations

Wolf, B.E. **127**, 93

Equivalent Widths

A Criterion for the Measurement of Equivalent Widths

Crivellari, L., Mardirossian, F., Morossi, C. **72**, 256

Determination of Microturbulent Velocities in Early-type Stars

Dufton, P.L., Durrant, A.C., Durrant, C.J. **97**, 10

Absorption Line Wavelengths and Equivalent Widths for the Extreme Helium-rich Star HD 168476

Lynas-Gray, A.E., Walker, H.J. **100**, 332; **44**, 349

Measurements of the Equivalent Width of the H_{β} Emission Line and Age Determination of H II Regions of the LMC and SMC

Dottori, H.A., Bica, E.L.D. **102**, 245

Equivalent Widths of Spectral Lines in B-type Stars (Text in French)

Didelon, P. **115**, 217; **50**, 199

Evershed Effect, see Sunspots

Evolution, see Galactic Evolution, Stellar Evolution, Evolution of Galaxies

Evolution of Galaxies

Chemical Composition and Evolution of Irregular and Blue Compact Galaxies

Lequeux, J., Peimbert, M., Rayo, J.F., Serrano, A., Torres-Peimbert, S. **80**, 155

Expansion Speeds in Extended Extragalactic Double Radio Sources from Angular Structure

Banhatti, D.G. **84**, 112

Models of the Evolution of Galaxies in Groups and Clusters

Himmes, A., Biermann, P. **86**, 11

Population Synthesis of Giant Ellipticals. A Composite Approach

Alvarez-Falcon, J.M. **89**, 291

An Analysis of the Cosmological Evolution of Radio Sources. II. Evolution Functions for Flat- and Steep-Spectrum Sources at 1400 MHz

Machalski, J. **95**, 209; **43**, 91

The Inner Regions of the Spiral Galaxy NGC 3310: Evidence for Galactic Cannibalism?

Balick, B., Heckman, T. **96**, 271

How Far Does M 101 Extend?

Donas, J., Milliard, B., Laget, M., Deharveng, J.M. **97**, L7

Metallicity and Dynamical Parameters for Spheroidal and Elliptical Galaxies

Vigroux, L., Chièze, J.P., Lazareff, B. **98**, 119

Evolution and Nucleosynthesis in Massive Stars with Mass Loss: The Yields in Helium and Heavy Elements and Constraints on the Past Star Formation Rate

Maeder, A. **101**, 385

Studies of the Magellanic Clouds. III. Colours, Gas and Past Star Formation Rate

Rocca-Volmerange, B., Lequeux, J., Maucherat-Joubert, M. **104**, 177

Galaxy Mergers and Active Galactic Nuclei

Roos, N. **104**, 218

The Helium to Heavy Element Enrichment Ratio, $\Delta Y/\Delta Z$

Chiosi, C., Matteucci, F. **105**, 140

The Radio Continuum Properties of SO Galaxies

Hummel, E., Kotanyi, C.G. **106**, 183

On the Sizes of Rings and Lenses in Disk Galaxies

Athanassoula, E., Bosma, A., Crèze, M., Schwarz, M.P. **107**, 101

Optical Identification/Flux Density Relationship for Radio Galaxies

Swarup, G., Subrahmanya, C.R., Venkatakrishna, K.L. **107**, 190

Chemical Evolution of Irregular Galaxies

Chiosi, C., Matteucci, F. **110**, 54

Gas Dynamics of Flow Past Galaxies

Shaviv, G., Salpeter E.E. **110**, 300

Dynamical friction on extended objects

Mulder, W.A. **117**, 9

Stochastic star formation and chemical evolution of dwarf irregular galaxies

Matteucci, F., Chiosi, C. **123**, 121

On the dynamical evolution of spiral galaxies

Bertin, G. **127**, 145

Excitation, see also Atomic Data

Population Ratios of Fine Structure Levels

Smeding, A.G., Pottasch, S.R. **71**, 274; **35**, 257

Interpretation of OH Main Line Anomalies in Interstellar Clouds

Bujarrabal, V., Nguyen-Q-Rieu **91**, 283

The Origin of the Infrared [C I] Emission: H II or H I Regions?

Cesarsky, D.A. **113**, L7

Expansion

Expansion Speeds in Extended Extragalactic Double Radio Sources from Angular Structure

Banhatti, D.G. **84**, 112

Extinction, see Earth Atmosphere, Interstellar Absorption and Extinction

F Stars

Methods for the Analysis of Stellar Spectra Veiled by Lines (III)

Greve, A., Zwaan, C. **90**, 239

Metal Abundance and Microturbulence in F0-G2 Stars and the Calibration of the Strömgren m_1 Index

Nissen, P.E. **97**, 145

Ca II H and K Chromospheric Emission in F- and G-type Stars

Dravins, D. **98**, 367

Observed and Computed UV Spectral Distribution of A and F Stars. Determination of T_e and $\log g$

Malagnini, M.L., Faraggiana, R., Morossi, C., Crivellari, L. **114**, 170

The λ Boo stars: a reappraisal

Hauck, B., Slettebak, A. **127**, 231

Four-colour *uvby* and $H\beta$ photometry of A5 to G0 stars brighter than 8.3

Olsen, E.H. **127**, 424; **54**, 55

Faculae

Steps Towards a Solar Network Model

Unno, W., Ribes, E. **73**, 314

A Common Model for Solar Filigree and Faculae

Stellmacher, G., Wiehr, E. **75**, 263

Magnetic Fields Observed in a Sunspot and Faculae Using 12 Lines Simultaneously

Semel, M. **97**, 75

Photospheric faculae-III-intensity, and magnetic field mapping of a typical element of the photospheric network

Daras-Papamargaritis, H., Koutchmy, S. **125**, 280

Faraday Rotation, see Polarization

Propagation of Electromagnetic Waves through Magnetized Plasmas in Arbitrary Gravitational Fields

Breuer, R.A., Ehlers, J. **96**, 293

Filaments, see also Solar Activity, Supernovae and Supernova Remnants

Faint, Nebulous Filaments, 2000 pc Diameter, around the 30 Doradus Nebula

Meaburn, J. **75**, 127

Physical Conditions in the Compact Heads of Powerful Radio Sources

Gopal-Krishna **81**, 328

Recombination Line Observations of the Galactic Center: The Arc-like Source

Pauls, T., Mezger, P.G. **85**, 26

Synthesized Map of a Solar Filament at 6 cm with ~ 15" Resolution

Rao, A.P., Kundu, M.R. **86**, 373

Steady Flow Models of Dark Filaments

Ribes, E., Unno, W. **91**, 129

VLA Observations of Solar Active Regions at 6 cm Wavelength

Kundu, M.R., Schmahl, E.J., Rao, A.P. **94**, 72

Dynamics in the Filaments: I. Oscillations in a Quiescent Filament

Malherbe, J.M., Schmieder, B., Mein, P. **102**, 124

A Morphological Study of Some Umbral Fine Structures

Soltan, D. **107**, 211

Current sheet models for solar prominences. I. Magnetohydrostatics of support and evolution through quasi-static models

Malherbe, J.M., Priest, E.R. **123**, 80

Current sheet models for solar prominences. II. Energetics and condensation process

Malherbe, J.M., Priest, E.R., Forbes, T.G., Heyvaerts, J. **127**, 153

Flare Stars

Nucleosynthesis of ^7Li in Flares on UV Ceti Stars

Karpen, J.T., Worden, S.P. **71**, 92

On "Negative Flares" and "Dips" of UV Cet-type Stars

Rodonò, M., Pucillo, M., Sedmak, G., de Biase, G.A. **76**, 242

The Colour Behaviour of Nine Flares of BY Dra, CR Dra, EV Lac and AD Leo Variable Stars

Cristaldi, S., Longhitano, M. **78**, 249; **38**, 175

Physical Parameters of Solar Neighbourhood Flare Stars

Pettersen, B.R. **82**, 53

On the Initial Distribution and Evolution of Angular Momentum for Main Sequence Stars

Carrasco, L., Franco, J., Roth, M. **86**, 217

Photometric Features near the Initial Phase of Flares on UV Cet-type Stars

Cristaldi, S., Gershberg, R.E., Rodonò, M. **89**, 123

Discovery of Flare Activity on the Very Low Luminosity Red Dwarf G 51-15

Pettersen, B.R. **95**, 135

Discovery of Flare Activity on G 141-29

Pettersen, B.R. **97**, 199

Observations of Flare Star Candidates and Discovery of Flare Activity on the dM4e Star Gliese 487

Asteriadis, G. **113**, 165

Statistical description of a simulacrum for eruptive variables

Whitney, C.A. **119**, 315

The flare activity of V 780 Tau

Pettersen, B.R. **120**, 192

Starspots and stellar flares on EV Lac and YZ CMi

Pettersen, B.R., Kern, G.A., Evans, D.S. **123**, 184

Flares, see Flare Stars, Solar Flares

"Solar Flares" on Neutron Stars and Degenerate Dwarfs

Tsygan, A.I. **87**, 224

Forbidden Lines, see Transition Probabilities

Forbidden Lines in Hot Astronomical Sources

Eidelsberg, M., Crifo-Magnant, F., Zeippen, C.J. **97**, 417; **43**, 455

The Forbidden Oxygen Lines in Comets

Festou, M.C., Feldman, P.D. **103**, 154

The Origin of the Infrared [C I] Emission: H II or H I Regions?

Cesarsky, D.A. **113**, L7

Formation of Galaxies

On the Limiting Ellipticity of Galaxies Formed by Dissipationless Collapse

Ozernoy, L.M., Kondrat'ev, B.P. **79**, 35

Secondary Peak in Clusters of Galaxies - A Clue to Their Formation?

Dekel, A., Shaham, J. **85**, 154

H I Observations and Star Formation in the Blue Compact Galaxy I Zw 18

Lequeux, J., Viallefond, F. **91**, 269

Neutrino Dating of the Galaxy Formation Epoch

Berezinsky, V.S., Ozernoy, L.M. **98**, 50

Thermal Evolution of a Contracting Hydrogen Gas Cloud

Hasegawa, T., Yoshii, Y., Sabano, Y. **98**, 186

Imprints of the Damping of Adiabatic Perturbations

Dekel, A. **101**, 79

Baryon Number Creation and Phase Transitions in the Early Universe

Hut, P., Klinkhamer, F.R. **106**, 245

Structure in the Universe from One Massive Neutrino?

Klinkhamer, F.R. **107**, 235

The Shape and Orientation of Clusters of Galaxies

Binggeli, B. **107**, 338

Extended H I-envelopes Around Spiral Galaxies: NGC 2655 and NGC 2715

Huchtmeier, W.K., Richter, O.-G. **109**, 331

The formation of disc galaxies

Jones, B.J.T., Wyse, R.F.G. **120**, 165

An exact solution for an isothermal gas cloud with fast differential rotation

Schmitz, F. **120**, 234

The distribution of violently relaxed matter in galaxies

Rephaeli, Y. **123**, 98

Observational limits on adiabatic theories of galaxy formation from microwave background data

Bonometto, S.A., Caldara, A., Lucchin, F. **126**, 377

Formation of Stars, see Star Formation

Fraunhofer Lines, see Line ...

FU Orionis Stars

Infrared Observations of Kuwano's Novalike Object

Bensammar, S., Friedjung, M., Assus, P. **83**, 261

A New 1720 MHz OH Outburst in V 1057 Cyg

Winnberg, A., Graham, D.A., Walmsley, C.M., Booth, R.S. **93**, 79

Fundamental Stars, see Astrometry, Celestial Mechanics

Determination of the Equinox and Equator of the FK 5

Fricke, W. **107**, L13

The magnitude equation in right ascension between the FK 4 and recent catalogues of southern observations

Bien, R., Schwan, H. **119**, 307

UBV photometry of FK 4 and FK 4 Supplement stars

Oja, T. **121**, 164; **52**, 131

New optical positions and proper motions of late type stars associated with SiO masers

Soulié, G., Baudry, A. **121**, 331; **52**, 299

G Stars

Analysis of the Far-ultraviolet Silicon Lines in G Dwarf

Fernandez-Figueroa, M.J., Rego, M., Cornide, M. **82**, 221

The Sun among the Stars. III. Energy Distributions of 16 Northern G-type Stars and the Solar Flux Calibration

Hardorp, J. **91**, 221

Ca II H and K Chromospheric Emission in F- and G-type Stars

Dravins, D. **98**, 367

Narrow-band photometry of G and K stars near the North Galactic Pole

Hansen, L., Radford, G.A. **126**, 223; **53**, 427

The Sun among the stars. VII. The H α profile of the Sun and the solar analog 16 Cygni B

Hardorp, J., Tomkin, J. **127**, 277

Galactic Bulge, see Galactic Structure

Radio Observations of Globular Clusters and Galactic Bulge X-ray Sources

Gopal-Krishna, Steppe, H. **88**, 354

A Radio Search for Planetary Nebulae Near the Galactic Center.

V. Mass Models of the Bulge

Isaacman, R. **95**, 46

A "Symmetrical" Kinematical Model for Elliptical Galaxies. Application to the Edge on Bulge of M 31

Monnet, G., Rosado, M. **102**, 175

Spectroscopic Observations of Spheroidal Systems: The Bulges of M 81, NGC 4736, and the Dwarf Elliptical M 32

Pellet, A., Simien, F. **106**, 214

Bulge X-ray Sources and Novae in M 31

Vader, J.P., van den Heuvel, E.P.J., Lewin, W.H.G., Takens, R.J. **113**, 328

Galactic Center

A Radio Search for Planetary Nebulae near the Galactic Center II. Flux Density Distribution

Isaacman, R. **81**, 359

Interpretation of Helium Recombination Line Observations of the Source Sgr B 2

Pitault, A., Cesarsky, D.A. **82**, 203

Recombination line observations of the galactic center: The arc-like source

Pauls, T., Mezger, P.G. **85**, 26

H I Absorption in the Direction of the Galactic Centre

Radhakrishnan, V., Sarma, N.V.G. **85**, 249

A Radio Search for Planetary Nebulae near the Galactic Center.

III. VLA and Optical Observations of Three Objects

Isaacman, R., Wouterloot, J.G.A., Habing, H.J. **86**, 254

Accretion and Radiation Spectrum of the Gas Debris of a Star Disrupted by the Tidal Forces of a Massive Black Hole

Gurzadyan, V.G., Ozernoy, L.M. **86**, 315

Formaldehyde in the Galactic Center Region: Interpretation

Güsten, R., Downes, D. **87**, 6

Observations of the $3_{12}-3_{13}$ Line of H $_2$ CO

Wilson, T.L., Walmsley, C.M., Henkel, C., Pauls, T., Mattes, H. **91**, 36

Formaldehyde in the Galactic Center Region: Observations

Bieging, J., Downes, D., Wilson, T.L., Martin, A.H.M., Güsten, R. **91**, 379; **42**, 163

An Indirect Measurement of the Galactic Center Distance

Quiroga, R.J. **92**, 186

Detection of the Positron Annihilation Gamma Ray Line from the Galactic Center Region

Albernehe, F., Leborgne, J.F., Vedrenne, G., Boclet, D., Durouchoux, P., da Costa, J.M. **94**, 214

A Radio Search for Planetary Nebulae Near the Galactic Center.

V. Mass Models of the Bulge

Isaacman, R. **95**, 46

A Systematic Search at 1612 MHz for OH Maser Sources. IV. Type II OH/IR Sources in the Central Region of the Galaxy

Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **95**, 171

Spiral Structure in the Galactic Nucleus?

Quiroga, R.J. **95**, 199

A Radio Search for Planetary Nebulae Near the Galactic Center. IV. Survey Data

Isaacman, R. **97**, 416; **43**, 405

High-Velocity Gas Toward the Galactic Center

Güsten, R., Downes, D. **99**, 27

A High Resolution 21-cm-line Survey of the Galactic Center Region

Braunsfurth, E., Rohlf, K. **100**, 333; **44**, 437

Galactic Kinematic Distances from Velocity Gradients

Rohlf, K. **102**, 91

Mass Models of the Galactic Bulge Derived from the Distribution of OH/IR Stars

Isaacman, R., Oort, M.J.A. **102**, 347

Ammonia in the Neighbourhood of the Galactic Center

Güsten, R., Walmsley, C.M., Pauls, T. **103**, 197

Bursts of Star Formation in the Galactic Centre

Loose, H.H., Krügel, E., Tutukov, A. **105**, 342

WSRT Observations of the H 110 α Recombination Line in the Galactic Centre

Bregman, J.D., Schwarz, U.J. **112**, L6

New Variable Stars in the Direction of the Bright Cloud B in Sagittarius

Terzan, A., Bijaoui, A., Ju, K.H., Ounnas, C. **112**, 396; **49**, 715

The Galactic Center - Structure and Kinematics from 21-cm Line Measurements

Rohlf, K., Braunsfurth, E. **113**, 237

Detection of the (8,8) and (9,9) Absorption Lines of Ammonia: The Hot Molecular Cloud Toward Sgr B 2

Wilson, T.L., Ruf, K., Walmsley, C.M., Martin, R.N., Pauls, T.A., Batrla, W. **115**, 185

New H $_2$ O masers in the galactic center region

Güsten, R., Downes, D. **117**, 343

Photographic surface photometry of the Milky Way. III. Photometry of the central area of the Galaxy in the ultraviolet (text in German)

Pröll, H.J., Schmidt-Kaler, T., Schlosser, W. **118**, 207; **51**, 16

- RGU photometry of a southern starfield near the galactic centre (SA 158)
Fenkart, R.P., Topaktas, L., Becker, W. **119**, 163; **51**, 213
- RGU photometry in a field of the Galactic Bulge
Spaenhauer, A.M., Topaktas, L., Fenkart, R.P. **119**, 326; **51**, 533
- X-ray observations of bright galactic bulge sources in the vicinity of GX 5-1
van der Klis, M., Rappaport, S. **121**, 119
- The gas distribution in the central region of the Galaxy. IV. A survey of neutral hydrogen in the region $349^\circ \leq l \leq 13^\circ$, $-10^\circ \leq b \leq 10^\circ$, $|v| \leq 350 \text{ km} \cdot \text{s}^{-1}$
Burton, W.B., Liszt, H.S. **121**, 163; **52**, 63
- The radio structure of Sgr A
Ekers, R.D., van Gorkom, J.H., Schwarz, U.J., Goss, W.M. **122**, 143
- H₂-densities and masses of the molecular clouds close to the galactic center
Güsten, R., Henkel, C. **125**, 136
- VLA synthesis of H I absorption toward Sgr A
Liszt, H.S., van der Hulst, J.M., Burton, W.B., Ondrechen, M.P. **126**, 341
- OH/IR stars within one degree of the galactic centre
Habing, H.J., Olon, F.M., Winnberg, A., Matthews, H.E., Baud, B. **128**, 230
- VLA observations of planetary nebulae at the Galactic Centre
Gathier, R., Pottasch, S.R., Goss, W.M., van Gorkom, J.H. **128**, 325
- Interpretation of the non-circular motion near the galactic center
Rohlfs, K. **128**, 426
- Galactic Clusters**, see Clusters, open
- Galactic Disk**, see also Galactic Rotation, Galactic Structure, Stellar Dynamics and Kinematics
- Chemical Evolution of the Galactic Disk: the Inflow Problem
Chiosi, C. **83**, 206
- On the Excitation of Warps in Galaxy Disks
Bertin, G., Mark, J. W.-K. **88**, 289
- Distribution of Near Infrared Sources in the Galactic Disk
Hayakawa, S., Matsumoto, T., Murakami, H., Uyama, K., Thomas, J.A., Yamagami, T. **100**, 116
- Pulsar Altitude Distribution as a Clue to Their Mean Velocity and Lifetime
Arnaud, M., Rothenflug, R. **103**, 263
- A Hydrodynamic Interaction Between the Galactic Disk and Halo, and Its Application to the Origin of Warping Gaseous Disks
Yoshii, Y., Fujimoto, M. **104**, 142
- Excitation of Warps in Galaxies: Fluid Model of Disk-halo Interaction
Bertin, G., Casertano, S. **106**, 274
- On the Sizes of Rings and Lenses in Disk Galaxies
Athanassoula, E., Bosma, A., Crézé, M., Schwarz, M.P. **107**, 101
- Plane Galactic Orbits in Stationary and Time-dependent Rotating Bars
Spreckels, H., Thielheim, K.O. **108**, 206
- Metallicity Effect and $\lambda 2.4 \mu\text{m}$ Excess in the Galactic Disk
Guiderdoni, B., Rocca-Volmerange, B. **109**, 355
- On the Disk Thickness of Spiral Galaxies
Rohlfs, K., Wiemer, H.-J. **112**, 116
- The formation of disc galaxies
Jones, B.J.T., Wyse, R.F.G. **120**, 165
- Periodic orbits and warps
Mulder, W.A. **121**, 91
- Binarity and the local stellar mass density
Mezzetti, M., Giuricin, G., Mardirossian, F. **122**, 333
- Galactic gamma radiation: the contribution from discrete sources
Houston, B.P., Wolfendale, A.W. **126**, 22
- Galactic Dynamics**, see Stellar Dynamics and Kinematics
- On the Excitation of Warps in Galaxy Disks
Bertin, G., Mark, J. W.-K. **88**, 289
- Mass Models of the Galactic Bulge Derived from the Distribution of OH/IR Stars
Isaacman, R., Oort, M.J.A. **102**, 347
- Standardization of stellar radial velocities in the presence of stellar rotation
Andersen, J., Nordström, B. **122**, 23
- Radial velocities of bright southern stars. I. 139 B-type HR and FK stars
Andersen, J., Nordström, B. **123**, 360; **52**, 471
- Radial velocities of bright southern stars. II. 53 late-type HR and FK 4 stars
Andersen, J., Nordström, B. **123**, 360; **52**, 479
- OH/IR stars within one degree of the galactic centre
Habing, H.J., Olon, F.M., Winnberg, A., Matthews, H.E., Baud, B. **128**, 230
- Interpretation of the non-circular motion near the galactic center
Rohlfs, K. **128**, 426
- Galactic Evolution**
- Comparison of the Rates of Formation of Massive Stars and of the Initial Mass Functions in Galaxies of the Local Group
Lequeux, J. **71**, 1
- The Effect of Mass Loss by Stellar Wind on the Chemical Enrichment of the Galaxy
Chiosi, C. **80**, 252
- Gas, Dust, High Energy Particles and Star Formation in the Galactic Center
Audouze, J., Lequeux, J., Masnou, J.-L., Puget, J.-L. **80**, 276
- White Dwarf Constraints on Mass Loss Rates and Models of Galactic Evolution
Koester, D., Weidemann, V. **81**, 145
- Chemical Evolution of the Galactic Disk: the Inflow Problem
Chiosi, C. **83**, 206
- Star Formation in the Inner Galaxy from Near and Far Infrared Observations
Serra, G., Puget, J.L., Ryter, C.E. **84**, 220
- Relations between Nucleosynthesis Rates and the Metal Abundance
Tinsley, B.M. **89**, 246
- A New Interpretation of the Heavy Element Abundances in Metal-deficient Stars
Truran, J.W. **97**, 391
- Effect of the Infall of Matter on the Dynamical Structure and Chemical Evolution of a Spiral Galaxy
Mayor, M., Vigroux, L. **98**, 1
- Kinematical and Chemical Evolution of the Galactic Disk near the Sun
Vader, J.P., de Jong, T. **100**, 124
- The Mild Abundance Gradient of NGC 1365
Alloin, D., Edmunds, M.G., Lindblad, P.O., Pagel, B.E.J. **101**, 377

- Further ($^{12}\text{C}/^{13}\text{C}$) Ratios from Formaldehyde: A Variation with Distance from the Galactic Center
Henkel, C., Wilson, T.L., Bieging, J. **109**, 344
- On the Disk Thickness of Spiral Galaxies
Rohfs, K., Wiemer, H.-J. **112**, 116
- Integrated Colors of Young Open Clusters as a Function of Age
Tarrab, I. **113**, 57
- Abundance of Lithium in Unevolved Halo Stars and Old Disk Stars: Interpretation and Consequences
Spite, F., Spite, M. **115**, 357
- The ^{187}Re - ^{187}Os chronology and chemical evolution of the Galaxy
Yokoi, K., Takahashi, K., Arnould, M. **117**, 65
- Evolution of a Population III star of low mass
Guenther, D.B., Demarque, P. **118**, 262
- Nitrogen and oxygen as indicators of primordial enrichment
Barbuy, B. **123**, 1
- The galactic globular cluster system: helium content versus metallicity
Caputo, F., Cayrel, R., Cayrel de Strobel, G. **123**, 135
- The canonical anticorrelation between Y and Z in galactic globular clusters and the case of the pulsators in M15
Caputo, F., Castellani, V., di Gregorio, R. **123**, 141
- New actinide chronometer production ratios and the age of the Galaxy
Thielemann, F.-K., Metzinger, J., Klapdor, H.V. **123**, 162
- Abundances in metal-poor stars. III. Eleven field giants
Gratton, R.G. **123**, 289
- Galactic evolution of the lithium isotopes
Audouze, J., Boulade, O., Malinie, G., Poilane, Y. **127**, 164
- Four-colour *u*by and H β photometry of A5 to G0 stars brighter than 8.3
Olsen, E.H. **127**, 424; **54**, 55
- Galactic Halo**, see also Halo
- A Search for Faint Blue Stars in High Galactic Latitudes. II. Fourteen PSS Fields at Declinations $+6^\circ$ and 0° near the South Galactic Pole
Berger, J., Fringant, A.-M. **81**, 388; **39**, 39
- Derivation of the Age Distributions of Cosmic Rays in a Galaxy with a Convective Halo
Freedman, I., Giler, M., Kearsey, S., Osborne, J.L. **82**, 110
- Contributions of the Theory of Spiral Structure. III. The Influence of Homogeneous and Inhomogeneous Halos on the Equilibrium and Stability of Disk Galaxies
Schmidt-Kaler, Th., Wiegandt, R. **82**, 238
- Synthesis of Light Metals in the Galaxy. Aluminium Abundances in Cool Halo Stars
Spite, M., Spite, F. **89**, 118
- The Overall Distribution of Mass in Our Galaxy
Miyamoto, M., Satoh, C., Ohashi, M. **90**, 215
- "Quasi-" and "Semiempirical" Lower Mass-limits for the Three-colour-photometrically Defined Halo-population
Fenkart, R.P. **91**, 352
- On the Abundance Structure of the Inner Galactic Halo: A Preliminary Report
Trefzger, Ch.F. **95**, 184
- Interstellar Hot Plasma Contributions to the Diffuse Ultraviolet Background
Jakobsen, P., Paresce, F. **96**, 23
- Metallicity Distribution in the System of Globular Clusters
Colin, J. **97**, 33
- Metallicity Distribution in the System of Globular Clusters
Colin, J. **97**, 33
- On Roche Limit in a Galaxy
Robe, H. **97**, 182
- Possible Red Horizontal Branch Stars in the Galactic Field
Straižys, V., Bartkevičius, A., Sperauskas, J. **99**, 152
- Carbon-to-iron Ratio in Extreme Population II Stars
Barbuy, B. **101**, 365
- A Hydrodynamic Interaction Between the Galactic Disk and Halo, and Its Application to the Origin of Warping Gaseous Disks
Yoshii, Y., Fujimoto, M. **104**, 142
- The Radial Velocity Field of the Milky Way Outside the Galactic Plane
Feitzinger, J.V., Kreitschmann, J. **111**, 255
- Abundance of Lithium in Unevolved Halo Stars and Old Disk Stars: Interpretation and Consequences
Spite, F., Spite, M. **115**, 357
- Roche's limit in a galaxy. II. The effects of rotation
Robe, H. **120**, 215
- Density gradients for disc- and halo-stars in the direction of the globular cluster NGC 7006
Becker, W., Karaali, S. **121**, 330; **52**, 269
- IUE observations of high velocity interstellar gas tentatively associated with Radio Loop II
Bates, B., Brown-Kerr, W., Giarretta, D.L., Keenan, F.P. **122**, 64
- Abundances in metal-poor stars. III. Eleven field giants
Gratton, R.G. **123**, 289
- A search for halo gradients through RR Lyrae pulsators
Castellani, V., Maceroni, C., Tosi, M. **128**, 64
- Galactic Light**, see also Interstellar Radiation Field
- Rocket Photometry of Ultraviolet Galactic Light
Pitz, E., Leinert, C., Schulz, A., Link, H. **72**, 92
- A Photometric Disk Model of the Milky Way. I. Direct Starlight Intensities and Effect of Clumping
Caplan, J., Grec, G. **78**, 335
- Synthetic Spectrum of the Integrated Starlight between 3,000 and 10,000 Å. Part II. Discussion
Mattila, K. **82**, 373
- Statistical Distribution of the Interstellar Dust Temperature
Rouan, D. **87**, 169
- The Nature of the UV Radiation Background
Maucherat-Joubert, M., Deharveng, J.M., Cruvellier, P. **88**, 323
- Photographic Surface Photometry of the Milky Way. IV. The Northern Milky Way in the Ultraviolet Spectral Region (Text in German)
Winkler, C., Schmidt-Kaler, T., Schlosser, W. **115**, 115
- Galactic Nucleus**, see Galactic Center
- Compact Radio Sources in the Galactic Center Region
Downes, D., Goss, W.M., Schwarz, U.J., Wouterloot, J.G.A. **71**, 270; **35**, 1
- A Systematic Search at 1612 MHz for OH Maser Sources. I. Surveys near the Galactic Centre
Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **71**, 273; **35**, 179
- Ammonia in Absorption in the Direction of Sagittarius B 2
Winniewisser, G., Churchwell, E., Walmsley, C.M. **72**, 215
- Cosmic Dust in the Central Region of the Galaxy and Anomalous Infrared Sources at $l = 335^\circ$, $b = -1^\circ$
Oda, N., Maihara, T., Sugiyama, T., Okuda, H. **72**, 309

The Detection of Planetary Nebulae near the Galactic Centre at Radio Wavelengths. I

Wouterloot, J.G.A., Dekker, E. **75**, 259; **36**, 323

Survey of Neutral Hydrogen in the Galactic Center Region

Sinha, R.P. **76**, 258; **37**, 403

A New Upper Limit to the Abundance Ratio of Atomic Deuterium to Hydrogen in the Direction of the Galactic Centre

Anantharamaiah, K.R., Radhakrishnan, V. **79**, L9

Gas, Dust, High Energy Particles and Star Formation in the Galactic Center

Audouze, J., Lequeux, J., Masnou, J.-L., Puget, J.-L. **80**, 276

Three-colour Photometry in the SA 133 Field near the Galactic Centre

Becker, W. **80**, 329; **38**, 341

Galactic Rotation

A Contribution to the Kinematics of the Gould Belt

Tsioumis, A., Fricke, W. **75**, 1

The Rotation and Structure of the Galaxy beyond the Solar Circle.

I. Photometry and Spectroscopy of 276 Stars in 45 H II Regions and Other Young Stellar Groups toward the Galactic Anticentre

Moffat, A.F.J., Fitzgerald, M.P., Jackson, P.D. **78**, 250; **38**, 197

Effect of the Infall of Matter on the Dynamical Structure and Chemical Evolution of a Spiral Galaxy

Mayor, M., Vigroux, L. **98**, 1

Galactic Kinematic Distances from Velocity Gradients

Rohlf, K. **102**, 91

Etude de la Structure Galactique dans une Région de la Poupe

Peton-Jonas, D. **102**, 280; **45**, 193

On the Evidence of a Massive Galactic Corona

Rohlf, K. **105**, 296

Spectroscopic Observations of Spheroidal Systems: The Bulges of M 81, NGC 4736, and the Dwarf Elliptical M 32

Pellet, A., Simien, F. **106**, 214

Rotation of the Dust Lane in NGC 1947

Möllenhoff, C. **108**, 130

The Velocity Field of the Ionized Gas in the Barred Galaxy NGC 925

Marcelin, M., Boulesteix, J., Courtès, G. **108**, 134

The Large Scale Trend of Rotation Curves in the Spiral Galaxies NGC 1068 and NGC 3310

Galletta, G., Recillas-Cruz, E. **112**, 361

High Resolution H I Observations of Messier 31

Bajaja, E., Shane, W.W. **112**, 396; **49**, 745

Rotation, mass and excitation of the spiral galaxy NGC 3893 (text in French)

Meyssonnier, N. **119**, 325; **51**, 429

Rotation curves and masses of galaxies

Lequeux, J. **125**, 394

Galaxies rotation curves: a catalogue

Baiesi-Pillastrini, G.C., Palumbo, G.G.C., Vettolani, G. **126**, 221; **53**, 373

Galactic Structure, see also Density Waves, Galactic Nucleus, Gould's Belt, Interstellar Matter, Radio Frequency Lines: 21 cm Line, Stellar Dynamics and Kinematics

Survey of the Galactic Plane at 4.875 GHz

Altenhoff, W.J., Downes, D., Pauls, T., Schraml, J. **71**, 270; **35**, 23

RGU Photometry of a Field in the Direction to the Scutum Cloud

Karaali, S. **71**, 274; **35**, 241

Semi-theoretical Density Profiles for Late-type Giants along the Galactic Radius through the Sun

Spaenhauer, A.M., Fenkart, R.P. **71**, 274; **35**, 249

H₂O in the Galaxy. II. Duration of the Maser Phase and the Galactic Distribution of H₂O Sources

Genzel, R., Downes, D. **72**, 234

An Investigation of the Interstellar Extinction in 11 Selected Directions on the Carina-Crux-Centaurus Region of the Milky Way

Sundman, A. **72**, 379; **35**, 327

Photometry of Loose Clusterings in the Southern Milky Way

Lodén, L.O. **73**, 366; **36**, 83

A Synoptic View of the Galaxy in H I

Cleary, M.N., Heiles, C., Haslam, C.G.T. **73**, 366; **36**, 95

Erratum: Photometry of Loose Clusterings in the Southern Milky Way

Lodén, L.O. **73**, 366; **36**, 485

The Density Response of a Typical Disc Stellar Population to a Spiral Perturbation near the Corotation Resonance

Mennessier, M.O., Martinet, L. **75**, 276

The Large Scale Structure of the Galactic Gamma-ray Emissivity

Caraveo, P.A., Paul, J.A. **75**, 340

A New Determination of the Thickness of the Galactic Disk from H I observations and a Discussion of Some Consequences for Galactic Mass Models

Celnik, W., Rohlf, K., Braunsfurth, E. **76**, 24

The Displacement of Spiral Arms of the Galaxy from the Galactic Plane

Kolesnik, L.N., Vedenicheva, I.P. **76**, 124

A Survey of OH near the Galactic Plane

Turner, B.E. **76**, 132; **37**, 1

Far Infrared Diffuse Emission from the Galactic Plane. II. The Longitude Profile

Serra, G., Boissé, P., Gispert, R., Wijnbergen, J., Ryter, C., Puget, J.L. **76**, 259

Electron Temperature Gradients with Distance from the Galactic Center?

Wilson, T.L., Pauls, T.A., Ziurys, L.M. **77**, L3

Erratum: The Density Response of a Typical Disc Stellar Population to a Spiral Perturbation near the Corotation Resonance

Mennessier, M.O., Martinet, L. **77**, 370

Disk Accretion in a Soft Potential Well

Icke, V. **78**, 21

The Rotation and Structure of the Galaxy beyond the Solar Circle. I. Photometry and Spectroscopy of 276 Stars in 45 H II Regions and Other Young Stellar Groups toward the Galactic Anticentre

Moffat, A.F.J., Fitzgerald, M.P., Jackson, P.D. **78**, 250; **38**, 197

Radio Continuum Observations of the North Polar Spur at 1420 MHz

Sofue, Y., Reich, W. **78**, 251; **38**, 251

A Photometric Disk Model of the Milky Way. I. Direct Starlight Intensities and Effect of Clumping

Caplan, J., Grec, G. **78**, 335

Kinematics of Planetary Nebulae. I.

Purgathofer, A., Perinotto, M. **81**, 215

The Number-intensity Relation for Galactic γ -ray Sources and the Emission from the Galactic Disk

Rothenflug, R., Caraveo, P. **81**, 218

Contributions of the Theory of Spiral Structure. III. The Influence of Homogeneous and Inhomogeneous Halos on the Equilibrium and Stability of Disk Galaxies

Schmidt-Kaler, Th., Wiegandt, R. **82**, 238

- Far Infrared Emission from the Galactic Plane. I. Observations at the Galactic Longitude $l^{\text{II}} = 27.5^\circ$
Viallefond, F., Léna, P., de Muizon, M., Nicollier, C., Rouan, D., Wijnbergen, J.J. **83**, 22
- Time Variable 21 cm Lines in High Galactic Latitudes
Kalberla, P.M.W., Mebold, U., Velden, L. **83**, 384; **39**, 337
- Star Formation in the Inner Galaxy from Near and Far Infrared Observations
Serra, G., Puget, J.L., Ryter, C.E. **84**, 220
- Galactic H I at $l \geq 10^\circ$. II. Photographic Presentation of the Combined Southern and Northern Data
Colomb, F.R., Pöppel, W.G.L., Heiles, C. **84**, 268; **40**, 47
- Galaxies Near the Northern Galactic Plane
Weinberger, R. **84**, 270; **40**, 123
- The Nature of Single-line Population I Wolf-Rayet Stars. Evidence for High Space Velocity
Moffat, A.F.J., Isserstedt, J. **85**, 201
- A Study of Early-type Stars in an Area in Puppis
Wrandemark, S. **86**, 64
- H I 10 α and H₂CO Survey of Galactic Radio Sources
Downes, D., Wilson, T.L., Bieging, J., Wink, J. **86**, 269; **40**, 379
- A New Method for Deriving Space Densities of Stars
Ochsenbein, F. **86**, 321
- About the Flux Density Distribution, The Galactic Distribution and the Birthrate of Pulsars
Arnaud, M., Rothenflug, R. **87**, 196
- A Study of Early-type Stars in Directions Close to the Carina ARM
Wrandemark, S. **87**, 253; **41**, 33
- Colour Excess and Stellar Distribution in Five Selected Directions of the Milky Way in Carina, Crux, Centaurus and Norma
Johansson, K.L.V. **87**, 253; **41**, 43
- A Survey of Neutral Hydrogen in the Region $310^\circ \leq l \leq 325^\circ$, $-32^\circ \leq b \leq -17^\circ$
Bajaja, E., Colomb, F.R., Morras, R. **87**, 253; **41**, 67
- Four-colour and H β Photometry for Early Type Stars in Three Southern Galactic Regions
Lodén, K., Lindblad, P.O., Schober, J., Urban, A. **87**, 254; **41**, 85
- Studies of the Carina Nebula: IV. A New Determination of the Distances of the Open Clusters Tr 14, Tr 15, Tr 16 and Cr 228 Based on Walraven Photometry
Thé, P.S., Bakker, R., Antalova, A. **87**, 254; **41**, 93
- H I 21 cm Line Observations at Low Galactic Latitudes in the Southern Hemisphere
Bajaja, E., Morras, R. **87**, 254; **41**, 121
- The Formation of Super-rings
Tenorio-Tagle, G. **88**, 61
- Concluding Observations of Loose Stellar Clusterings in the Southern Milky Way
Lodén, L.O. **88**, 282; **41**, 173
- Relations between Chemical, Spatial, and Kinematic Properties of Planetary Nebulae
Acker, A. **89**, 33
- Contributions to the Theory of Spiral Structure. IV. The Propagation of Sound Waves in an Inhomogeneous Interstellar Medium
Schmidt-Kaler, Th., Wiegandt, R. **89**, 67
- The Distribution of the Interstellar Dust in the Galactic Plane within 3 kpc
Krautter, J. **89**, 74
- The Interstellar Reddening Law in the Visible
Lucke, P.B. **90**, 350
- Interstellar Reddening Towards the South Galactic Pole
Albrecht, R., Maitzen, H.M. **91**, 261; **42**, 9
- Low-dispersion Spectral Classification and *UBV* Photographic Photometry of H α -Emission Objects in the Coalsack Region
Martinez, R.E., Muzzio, J.C., Waldhausen, S. **91**, 380; **42**, 179
- A 21 cm Radio Continuum Survey of the Galactic Plane Between $l = 93^\circ$ and $l = 162^\circ$
Kallas, E., Reich, W. **91**, 381; **42**, 227
- The Spatial Distribution of the Interstellar Extinction
Neckel, Th., Klare, G. **91**, 381; **42**, 251
- An Indirect Measurement of the Galactic Center Distance
Quiroga, R.J. **92**, 186
- The Possible Nature of the High-velocity OB Stars: Hot UV-bright Stars in the Galactic Disk
Carrasco, L., Bisiacchi, G.F., Cruz-González, C., Firmani, C., Costero, R. **92**, 253
- Detection of the Positron Annihilation Gamma Ray Line from the Galactic Center Region
Albernhe, F., Leborgne, J.F., Vedrenne, G., Boclet, D., Durouchoux, P., da Costa, J.M. **94**, 214
- A Far-infrared Survey of the Milky Way from Sagittarius to Cygnus: Evidence for Large Scale Variations of the Star Formation Rate and Initial Mass Function
Boissé, P., Gispert, R., Coron, N., Wijnbergen, J.J., Serra, G., Ryter, C., Puget, J.L. **94**, 265
- A Systematic Search at 1612 MHz for OH Maser Sources. III. The Galactic Distribution, Kinematics, and Emission Properties of Type II OH/IR Sources
Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **95**, 156
- Spiral Structure in the Galactic Nucleus?
Quiroga, R.J. **95**, 199
- New Galactic Sources in the BG Catalogue: Search at 1.4 GHz with the Westerbork Synthesis Radiotelescope
Fanti, C., Mantovani, F., Tomasi, P. **95**, 208; **43**, 1
- A Study of Early-Type Stars in a Perseus Arm Area
Wrandemark, S. **95**, 210; **43**, 103
- RGU Three-colour Photometry of a Field in Norma (Norma III)
Kandemir, G. **95**, 394; **43**, 239
- Vitesses radiales de 713 étoiles appartenant à 4 champs de $4^\circ \times 4^\circ$, mesurées au prisme objectif de 620 mm de l'Observatoire de Haute-Provence
Fehrenbach, Ch., Burnage, R. **95**, 396; **43**, 296
- Formation and Properties of Persisting Stellar Bars
Combes, F., Sanders, R.H. **96**, 164
- Observations of Diffuse Far Infrared Emission and Distribution of Interstellar Dust
Maihara, T., Oda, N., Shibai, H., Okuda, H. **97**, 139
- A Study of Some Stars in the Region of the Open Cluster NGC 3532 and the Regions of Five Lodén Cluster Candidates in the Southern Milky Way
Johansson, K.L.V. **97**, 417; **43**, 421
- Effect of the Infall of Matter on the Dynamical Structure and Chemical Evolution of a Spiral Galaxy
Mayor, M., Vigroux, L. **98**, 1
- On the Structure and Typical Age of Certain Loose Clusterings in the Milky Way
Lodén, L.O. **98**, 71
- Distribution of Galactic Synchrotron Emission. I
Phillips, S., Kearsey, S., Osborne, J.L., Haslam, C.G.T., Stof-fel, H. **98**, 286
- A Tentative Explanation of the Colour Gradients in the Cores of Globular Clusters
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **98**, 344

- Further 21-cm Survey Observations in the Southern Milky Way, II
Kerr, F.J., Bowers, P.F., Henderson, A.P. **99**, 203; **44**, 63
- The Distribution of Early-type Stars and Dust Around $l = 114^\circ$
Wrandemark, S. **99**, 204; **44**, 115
- A Photometric Study of Two Stellar Clusterings in the Southern Milky Way (and a General Consideration on Previous and Present Data Concerning Galactic Clusterings)
Lodén, L.O. **99**, 205; **44**, 155
- $uvby\beta$ Photometry of 210 B, A, and F Stars in Ten Areas Centered on Extragalactic Radio Sources at High Northern Galactic Latitudes
Knude, J. **99**, 402; **44**, 225
- Distribution of Near Infrared Sources in the Galactic Disk
Hayakawa, S., Matsumoto, T., Murakami, H., Uyama, K., Thomas, J.A., Yamagami, T. **100**, 116
- A 408 MHz All-sky Continuum Survey. I. Observations at Southern Declinations and for the North Polar Region
Haslam, C.G.T., Klein, U., Salter, C.J., Stoffel, H., Wilson, W.E., Cleary, M.N., Cooke, D.J., Thomasson, P. **100**, 209
- Kinematics of Planetary Nebulae. II
Purgathofer, A., Perinotto, M. **101**, 247
- The Density Response of a Stellar Disk to Growing Oval Mass Distributions. The Exponential Mass Model in First Order Epicyclic Approximation
Polzin, D., Thielheim, K.O. **101**, 409
- Etude de la Structure Galactique dans une Région de la Poupe
Peton-Jonas, D. **102**, 280; **45**, 193
- A Southern Atlas of Galactic Hydrogen. III. The Regions $320^\circ \leq l \leq 345^\circ$, $+18^\circ \leq b \leq +26^\circ$ and $346^\circ \leq l \leq 350^\circ$, $+18^\circ \leq b \leq +20^\circ$.
Olano, C.A., Pöppel, W.G.L., Vieira, E.R. **103**, 208; **46**, 41
- A Photometric Catalogue of Stars in the Direction of the Bright Cloud B in Sagittarius
Terzan, A., Bernard, A. **103**, 208; **46**, 49
- RGU Photometry of a Field in the Large Sagittarius Cloud (Sgr III)
Topaktas, L. **103**, 209; **46**, 93
- UBV Surface Brightness Photometry of eight Sections Through the Milky Way from the Helios Space Probes
Leinert, C., Richter, I. **103**, 210; **46**, 115
- Distribution of Galactic Synchrotron Emission. II
Phillipps, S., Kearsey, S., Osborne, J.L., Haslam, C.G.T., Stoffel, H. **103**, 405
- A New Analysis of the Pulsar Distribution in the Galaxy
Morini, M. **104**, 75
- A Hydrodynamic Interaction Between the Galactic Disk and Halo, and Its Application to the Origin of Warping Gaseous Disks
Yoshii, Y., Fujimoto, M. **104**, 142
- Large-scale Distribution of Galactic Gamma Radiation Observed by COS-B
Mayer-Hasselwander, H.A., Bennett, K., Bignami, G.F., Bucheri, R., Caraveo, P.A., Hermesen, W., Kanbach, G., Lebrun, F., Lichti, G.G., Masnou, J.L. **105**, 164
- Far IR Emission of the Galactic Plane at High Longitudes
Bussoletti, E., Guidi, I., Melchiorri, F., Natale, V. **105**, 184
- Optical Study of the W 51 Complex
Goudis, C., Hippelein, H. **105**, 329
- The Origin of the Diffuse Galactic Far Infrared and Sub-millimeter Emission
Mezger, P.G., Mathis, J.S., Panagia, N. **105**, 372
- Space Density of Stars and Interstellar Extinction near h and χ Persei (Perseus I)
Becker, W., Wooden, H.W. **106**, 179; **46**, 347
- A 408 MHz All-sky Continuum Survey. II. The Atlas of Contour Maps
Haslam, C.G.T., Salter, C.J., Stoffel, H., Wilson, W.E. **106**, 181; **47**, 1
- Far Infrared Survey of Extended Molecular Clouds H II Regions Complexes Along the Galactic Plane
Gispert, R., Puget, J.L., Serra, G. **106**, 293
- Three-Colour Photometry of the Milky-Way Field HD 95540
Becker, W., Hassan, S.M. **106**, 379; **47**, 247
- RGU Three Colour Photometry of a Field in Centaurus
Spaenhauer, A., Fang, Ch. **107**, 412; **47**, 441
- Three-colour Photometry of a Field in the Galactic Anticentre Section Near NGC 2360
Morales Durán, C. **108**, 416; **48**, 139
- Open Clusters in Our Galaxy
Lynga, G. **109**, 213
- Extragalactic Gamma Radiation: Use of Galaxy Counts as a Galactic Tracer
Thompson, D.J., Fichtel, C.E. **109**, 352
- Metallicity Effect and λ 2.4 μ m Excess in the Galactic Disk
Guiderdoni, B., Rocca-Volmerange, B. **109**, 355
- High Order Momenta of the Local Stellar Velocity Distribution
Núñez, J., Torra, J. **110**, 95
- Properties and Performance of the MPI Balloon Borne Compton Telescope
Schönfelder, V., Graser, U., Diehl, R. **110**, 138
- A Radio Continuum Survey of the Northern Sky at 1420 MHz - Part I
Reich, W. **110**, 180; **48**, 219
- Can Giant Molecular Clouds Form in Spiral Arms?
Casoli, F., Combes, F. **110**, 287
- Three-colour Photometry of a Field near the Galactic Centre (SA 133 F)
Becker, W., Fang, Ch. **111**, 209; **49**, 61
- Telescope Beam Characteristics and Temperature Scale of the Maryland-Green Bank 21-cm Line Survey
Westerhout, G., Mader, G.L., Harten, R.H. **111**, 212; **49**, 137
- The Maryland-Green Bank Galactic 21-cm Line Survey
Westerhout, G., Wendlandt, H.-U. **111**, 212; **49**, 143
- The Radial Velocity Field of the Milky Way Outside the Galactic Plane
Feitzinger, J.V., Kreitschmann, J. **111**, 255
- RGU-photometry of the Field Vela II
Becker, W., Marsoglu, A. **112**, 133
- A Photoelectric UBV Sequence in a Low Extinction Puppis Field
Reed, B.C., FitzGerald, M.P. **112**, 179; **49**, 521
- Four-colour and H β Photometry for O-A0 type Stars in Three Regions Near the Galactic Equator
Westin, T.N.G. **112**, 180; **49**, 561
- New Variable Stars in the Direction of the Bright Cloud B in Sagittarius
Terzan, A., Bijaoui, A., Ju, K.H., Ounnas, C. **112**, 396; **49**, 715
- Formaldehyde Absorption in S 128
Heske, A., Wendker, H.J. **113**, 170
- The Theoretical Expected Galactic Distribution of WR Runaway Stars
Vanbeveren, D. **113**, 205
- The Galactic Center - Structure and Kinematics from 21-cm Line Measurements
Rohlfs, K., Braunsfurth, E. **113**, 237

- Photographic Surface Photometry of the Milky Way. II. Surface Photometry in the Region of the Dark Cloud "Coalsack" in U, B, V, R (in German)
Seidensticker, K.J., Schmidt-Kaler, T., Schlosser, W. **114**, 60
- RGU-three Colour Photometry of a Field near NGC 6171 (Text in German)
Wiedemann, D. **114**, 421; **50**, 93
- Photographic Surface Photometry of the Milky Way. IV. The Northern Milky Way in the Ultraviolet Spectral Region (Text in German)
Winkler, C., Schmidt-Kaler, T., Schlosser, W. **115**, 115
- A Pool of Faint Stars Applied to Star Catalogue Formation
Hering, R., Walter, H.G. **115**, 197
- UBV-H β Photometry of Luminous Stars Between $l = 335^\circ$ and $l = 6^\circ$
Dachs, J., Kaiser, D., Nikolov, A., Sherwood, W.A. **115**, 218; **50**, 261
- The Galactic Abundance Gradient from Supernova Remnant Observations
Binette, L., Dopita, M.A., D'Odorico, S., Benvenuti, P. **115**, 315
- Neutral hydrogen observations towards the Puppis Window of the Milky Way
Stacy, J.G., Jackson, P.D. **117**, 171; **50**, 377
- Photographic surface photometry of the Milky Way. I. Data and reduction methods (text in German)
Schmidt-Kaler, T., Seidensticker, K.J., Pröll, H.J., Schlosser, W., Beck, R. **118**, 206; **51**, 1
- Photographic surface photometry of the Milky Way. III. Photometry of the central area of the Galaxy in the ultraviolet (text in German)
Pröll, H.J., Schmidt-Kaler, T., Schlosser, W. **118**, 207; **51**, 16
- The rotation measures of radio sources in selected celestial zones - the Perseus Arm Window
Vallée, J.P. **118**, 210; **51**, 127
- The diffuse gamma radiation of the local spiral arm (Text in German)
Schlosser, W., Feitzinger, J.V. **119**, 42
- RGU photometry of a southern starfield near the galactic centre (SA 158)
Fenkart, R.P., Topaktas, L., Becker, W. **119**, 163; **51**, 213
- RGU photometry in a field of the Galactic Bulge
Spaenhauer, A.M., Topaktas, L., Fenkart, R.P. **119**, 326; **51**, 533
- The gas distribution in the central region of the Galaxy. IV. A survey of neutral hydrogen in the region $349^\circ \leq l \leq 13^\circ$, $-10^\circ \leq b \leq 10^\circ$, $|v| \leq 350 \text{ km} \cdot \text{s}^{-1}$
Burton, W.B., Liszt, H.S. **121**, 163; **52**, 63
- Linear polarization observations in selected celestial zones: the anticentre region
Vallée, J.P. **121**, 163; **52**, 125
- Density gradients for disc- and halo-stars in the direction of the globular cluster NGC 7006
Becker, W., Karaali, S. **121**, 330; **52**, 269
- Periodic orbits in a three-dimensional potential (Text in French)
Hayli, A., Desolneux, N., Galletta, G. **122**, 137
- Bulge-halo effects in barred galaxies
Terzides, C., Michalodimitrakis, M. **122**, 231
- Binarity and the local stellar mass density
Mezzetti, M., Giuricin, G., Mardirossian, F. **122**, 333
- The populations of massive stars in the Galaxy: their frequency gradients in relation to metallicity and initial mass function
Meylan, G., Maeder, A. **124**, 84
- Large-scale magnetic field in the Perseus spiral arm
Vallée, J.P. **124**, 147
- Medium size radio continuum loops and their association with H I shells
Sofue, Y., Nakai, N. **124**, 152; **53**, 57
- Radial velocities for early type stars in six galactic regions
Zentelis, N. **126**, 223; **53**, 445
- The extended component of the radio continuum radiation from the Cassiopeia-Perseus region
Kallas, E., Reich, W., Haslam, C.G.T. **128**, 268
- Galaxies**, see also Clusters of Galaxies, Compact Galaxies, Dwarf Galaxies, Elliptical Galaxies, Formation of Galaxies, Interacting Galaxies, Local Group, M 31, Magellanic Clouds, Protogalaxies, Quasi Stellar Objects, Ring Galaxies, Seyfert Galaxies, Spiral Galaxies
- On Peculiar Hot-spots Nuclei of Galaxies
Alloin, D., Kunth, D. **71**, 335
- Radio Galaxies with Dust Lanes
Kotanyi, C.G., Ekers, R.D. **73**, L1
- Gas Flow in the Disk of the Galaxy NGC 4258. I. A First Two-dimensional Model
Icke, V. **74**, 42
- On the Dark Halo of NGC 4565
Dekel, A., Shaham, J. **74**, 186
- "Sequences" and "Populations" of Early-type Galaxies
Michard, R. **74**, 206
- Practical Estimation of the Angular Covariance Function
Sharp, N.A. **74**, 308
- Gas Dynamical Calculations on Extragalactic Double Radio Sources
Nepveu, M. **75**, 149
- Galaxy Collisions and Their Influence on the Dynamics and Evolution of Groups and Clusters of Galaxies
Roos, N., Norman, C.A. **76**, 75
- Are Massive Galactic Haloes Necessary to Prevent Rapid, Global Bar Formation?
Berman, R.H., Mark, J.W.-K. **77**, 31
- On the Distance of Some Early-type Galaxies in the Field of NGC 7331
Michard, R. **78**, 122
- Self-consistent Bar Driven Spiral Density Waves in a Disk Galaxy
Berman, R.J., Pollard, D.J., Hockney, R.W. **78**, 133
- Relative Distance Moduli of Early-type Galaxies
Michard, R. **78**, 251; **38**, 245
- The Exact Solution of the Burbidge-Prendergast Integral Equation for the Mass Density in Galaxies
Schorr, B. **78**, 299
- The Distribution of Some Intrinsic Parameters of Head-tail Radio Sources
Valentijn, E.A. **78**, 367
- Magneto Gasdynamics of Double Radio Sources
Nepveu, M. **79**, 40
- Magnetohydrodynamic Instabilities and Electron Acceleration in Extended Extragalactic Radio Sources
Ferrari, A., Trussoni, E., Zaninetti, L. **79**, 190
- Structural Changes in the Nucleus of NGC 1275 at 2.8 cm Wavelength
Preuss, E., Kellermann, K.I., Pauliny-Toth, I.I.K., Witzel, A., Shaffer, D.B. **79**, 268
- Velocity Dispersions in H II Regions as Distance Indicators
de Vaucouleurs, G. **79**, 274

- Relative Luminosities and Distances of Early-type Galaxies
Michard, R. **79**, 337
- Physical Conditions in the Narrow Line Region in Active Galaxies and Quasars
Heckman, T.M., Balick, B. **79**, 350
- Supernova Remnants in M 33
Sabbadin, F. **80**, 212
- Self-Similarity and the Angular Momenta of Astronomical Systems. A Basic Rule in Astronomy
Wesson, P.S. **80**, 296
- On the Multiple Explosion Picture of Extended Radio Galaxies
Nepveu, M. **81**, 78
- How Far Do Bars Extend?
Contopoulos, G. **81**, 198
- Implications of Fine Scale Structure in Relaxed Double Radio Sources
Smith, M.D., Norman, C.A. **81**, 282
- Radio Sources in the Vicinity of Bright Galaxies
Hummel, E. **81**, 316
- Physical Conditions in the Compact Heads of Powerful Radio Sources
Gopal-Krishna **81**, 328
- On Galaxy Masses Determined from H I Profiles
Casertano, S.P.R., Shostak, G.S. **81**, 371
- Non-parametric Elimination of the Observational Magnitude Cutoff Bias
Nicoll, J.F., Segal, I.E. **82**, L3
- Radio Recombination Lines from NGC 253
Mebold, U., Shaver, P.A., Bell, M.B., Seaquist, E.R. **82**, 272
- A Survey of Nearby Galaxies for CO
Rowan-Robinson, M., Phillips, T.G., White, G. **82**, 381
- The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky. VII
Holmberg, E.B., Lauberts, A., Schuster, H.E., West, R.M. **82**, 394; **39**, 173
- On the Distance of the Giant Spiral Galaxy M 101
Capaccioli, M., Fasano, G. **83**, 354
- Galaxies Near the Northern Galactic Plane
Weinberger, R. **84**, 270; **40**, 123
- Some Comments on the Analysis of Extragalactic H II Regions Spectra
Stasińska, G. **84**, 320
- An Optical and Radio Survey of the Nuclei of Bright Galaxies: Sample Selection and Observations
Heckman, T.M., Balick, B., Crane, P.C. **86**, 267; **40**, 295
- An Optical and Radio Survey of the Nuclei of Bright Galaxies. Stellar Populations and Normal H II Regions
Heckman, T.M. **87**, 142
- An Optical and Radio Survey of the Nuclei of Bright Galaxies. Activity in Normal Galactic Nuclei
Heckman, T.M. **87**, 152
- A Two Component Mass Model for M 81 (NGC 3031)
Rohlf, K., Kreitschmann, J. **87**, 175
- On the Excitation of Warps in Galaxy Disks
Bertin, G., Mark, J.W.-K. **88**, 289
- Galaxy Models with Live Halos
Sellwood, J.A. **89**, 296
- Clustering of Blue Objects
Erculiani Abati, L. **93**, 282
- Abundance Determinations in H II Regions: A Critical Analysis of Two Empirical Methods
Stasińska, G., Alloin, D., Collin-Souffrin, S., Joly, M. **93**, 362
- Diffraction Model for Dark Ring Around Compact Object in NGC 1199
Weber, T.A. **95**, 5
- Accretion of the Cloud of Gas Debris of Stars Disrupted by the Tidal Forces of a Supermassive Black Hole
Gurzadyan, V.G., Ozernoy, L.M. **95**, 39
- Surface Photometry of Edge-on Spiral Galaxies. I. A Model for the Three-dimensional Distribution of Light in Galactic Disks
van der Kruit, P.C., Searle, L. **95**, 105
- Surface Photometry of Edge-on Spiral Galaxies. II. The Distribution of Light and Colour in the Disk and Spheroid of NGC 891
van der Kruit, P.C., Searle, L. **95**, 116
- Déterminations optique et radio de vitesses radiales de galaxies parentes de supernovae
Balkowski, C., Le Denmat, G., Nottale, L. **95**, 210; **43**, 121
- Merging of Galaxies in an Expanding Universe
Roos, N. **95**, 349
- How Far Does M 101 Extend?
Donas, J., Milliard, B., Laget, M., Deharveng, J.M. **97**, L7
- A Kinematical Model of Asymmetric Galaxies. Application to M 33
Colin, J., Athanassoula, E. **97**, 63
- The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky - VIII
Lauberts, A., Holmberg, E.B., Schuster, H.-E., West, R.M. **97**, 415; **43**, 307
- On Dynamic Gas Ablation from Spherical Galaxies
Nepveu, M. **98**, 65
- Mass-to-energy Relations for Galaxies and Clusters of Galaxies
Kaasra, J.S., van Bueren, H.G. **99**, 7
- The Thickness of the Hydrogen Layer and the Three-dimensional Mass Distribution in NGC 891
van der Kruit, P.C. **99**, 298
- Radial Velocities of Galaxies Determined from 21-cm Line Observations
Bottinelli, L., Gouguenheim, L., Paturel, G. **99**, 402; **44**, 217
- Star Formation and Extinction in Extragalactic H II Regions
Lequeux, J., Maucherat-Joubert, M., Deharveng, J.M., Kunth, D. **103**, 305
- Multidimensional Statistical Analysis of Normal Galaxies
Bujarrabal, V., Guibert, J., Balkowski, C. **104**, 1
- Automatic Classification of Galaxy Images by Fourier Structural Analysis
Sedmak, G., Trujillo Lamas, M.L. **104**, 93
- Observations of NGC 604 over Six Decades in Frequency
Israel, F.P., Gatley, I., Matthews, K., Neugebauer, G. **105**, 229
- The Properties of AP Librae from UBV Photoelectric Photometry
Westerlund, B.E., Wlérick, G., Garnier, R. **105**, 284
- On the Transport and Propagation of Relativistic Electrons in Galaxies. The Effect of Adiabatic Deceleration in a Galactic Wind for the Steady State Case
Lerche, I., Schlickeiser, R. **107**, 148
- Accurate Positions and Standard D_{25} Diameters for Galaxies in the Central Part of the Coma Cluster (Text in French)
Paturel, G., Perie, M., Rousseau, M. **107**, 413; **47**, 467
- Accurate Optical Positions of Isolated Galaxies
Brosch, N. **108**, 415; **48**, 63
- Automatic Image Classification
Butchins, S.A. **109**, 360
- Chemical Evolution of Irregular Galaxies
Chiosi, C., Matteucci, F. **110**, 54

Radial Velocities of Galaxies Detected in the Arecibo 2380 MHz Survey

Marano, B., Vettolani, G. **110**, 183; **48**, 453

Gas Dynamics of Flow Past Galaxies

Shaviv, G., Salpeter E.E. **110**, 300

Observed Radii and Structural Parameters of Clusters in the SMC

Kontizas, M., Danezis, E., Kontizas, E. **111**, 209; **49**, 1

Further Investigations on Possible Correlations Between QSOs and the Lick Catalogue of Galaxies

Nieto, J.-L., Seldner, M. **112**, 321

X-rays from a Peculiar Nucleus Galaxy NGC 2196

Agrawal, P.C., Singh, K.P. **113**, 73

Multiperture Photometry of Galaxies. II. Near-infrared Observations of Six Isolated Objects

Brosch, N., Isaacman, R. **113**, 231

Galactic Neutrino Models

Rephaeli, Y. **114**, 405

Transport and Propagation of Cosmic Rays in Galaxies. II. The Effect of a Galactic Wind on the Mean Lifetime and Age Distribution of Non-decaying Cosmic Rays

Lerche, I., Schlickeiser, R. **116**, 10

Lifetime of Spurs in Galaxies

Feitzinger, J.V., Schwerdtfeger, H. **116**, 117

Dynamical friction on extended objects

Mulder, W.A. **117**, 9

Ordered and ergodic motions of stars in galaxies

Contopoulos, G. **117**, 89

H I line studies of galaxies. II. The 21-cm line width as an extragalactic distance indicator

Bottinelli, L., Gouguenheim, L., Paturel, G., de Vaucouleurs, G. **118**, 4

The Hubble sequence of masses

Meisels, A. **118**, 21

The binary model for type I supernovae: theoretical rates

Greggio, L., Renzini, A. **118**, 217

On semi-degenerate equilibrium configurations of a collisionless self-gravitating Fermi gas

Ruffini, R., Stella, L. **119**, 35

Roche's limit in a galaxy. II. The effects of rotation

Robe, H. **120**, 215

Pairs of spiral galaxies with magnitude differences greater than one

Arp, H., Giraud, E., Sulentic, J.W., Vigier, J.P. **121**, 26

Periodic orbits and warps

Mulder, W.A. **121**, 91

Further statistics on the M/L ratios in early-type galaxies

Michard, R. **121**, 313

X-ray observations of radio-jet galaxies

Miley, G.K., Norman, C., Silk, J., Fabbiano, G. **122**, 330

The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. I. New Westerbork observations of 22 cD galaxies and Einstein observations of A 1918 and A 2317

Bijleveld, W., Valentijn, E.A. **125**, 217

Galaxy groups: correlations between luminosities, velocity dispersions and virial radii

Mezzetti, M., Giuricin, G., Malagnini, M.L., Mardirossian, F. **125**, 368

Standard photometric diameters of galaxies

Fouqué, P., Paturel, G. **126**, 221; **53**, 351

The relation between the luminosity of the brightest blue star and the luminosity of its parent galaxy

Schild, H., Maeder, A. **127**, 238

Galaxies, individual

BL Lac

The nature of the nebula around BL Lacertae

Rakos, K.D., Fiala, N. **124**, L11

B2 1321 + 31

Multifrequency High Resolution Observations of the Large Radio Galaxy B2 1321 + 31

Fanti, R., Lari, C., Parma, P., Bridle, A.H., Ekers, R.D., Fomalont, E.B. **110**, 169

Fornax

Discovery of an S star in the Fornax dwarf elliptical galaxy

Westerlund, B.E. **118**, L5

IC 342

Temperatures and Sizescales of Giant Cloud Complexes in the Spiral Galaxy IC 342

Ho, P.T.P., Martin, R.N., Ruf, K. **113**, 155

IC 5063

Spatial structure of the extended ionized nebulosity around the radio galaxy IC 5063

Bergeron, J., Durret, F., Boksenberg, A. **127**, 322

M 31

The Distribution of Thermal and Nonthermal Radio Continuum Emission of M31

Beck, R., Gräve, R. **105**, 192

Hot Stars in the Bulge of M 31: Upper Limit to the Star Formation Rate

Deharveng, J.M., Joubert, M., Monnet, G., Donas, J. **106**, 16

The Magnetic Field in M 31

Beck, R. **106**, 121

Search for (Globular) Clusters in M31. II: Photographic photometry of the Candidates in a 70' Square Field Centered on M31

Buonanno, R., Corsi, C.E., Battistini, P., Bónoli, F., Fusi Pecci, F. **107**, 412; **47**, 451

High Resolution H I Observations of Messier 31

Bajaja, E., Shane, W.W. **112**, 396; **49**, 745

Search for (Globular) Clusters in M 31. III. Structural Properties: X-ray Sources and Comparison with Galactic Globulars

Battistini, P., Bónoli, F., Buonanno, R., Corsi, C.E., Fusi Pecci, F. **113**, 39

Bulge X-ray Sources and Novae in M 31

Vader, J.P., van den Heuvel, E.P.J., Lewin, W.H.G., Takens, R.J. **113**, 328

A radio continuum survey of M 31 at 4850 MHz. I. Observations; list of sources

Berkhuijsen, E.M., Wielebinski, R., Beck, R. **117**, 141

Diameter distribution and Σ -D relation of SNRs in M 31 and in M 33

Berkhuijsen, E.M. **120**, 147

M 33

Optical Structure of the Nucleus of M 33

Nieto, J.-L., Aurière, M. **108**, 334

Wolf-Rayet Stars in Extragalactic H II Regions. II. NGC 604 — a Giant H II Region Dominated by Many Wolf-Rayet Stars

Rosa, M., D'Odorico, S. **108**, 339

The Mass Function of Blue Stars, the Production Rate of Lycophotons, and the Rate of Star Formation in M 33

Berkhuijsen, E.M. **112**, 369

Spectrophotometry of Wolf-Rayet Star Candidates in M 33

Wampler, E.J. **114**, 165

H II regions in M 33. I. Radio and H α observations of the H II complex NGC 595

Viallefond, F., Donas, J., Goss, W.M. **119**, 185

Diameter distribution and E-D relation of SNRs in M 31 and in M 33

Berkhuijsen, E.M. **120**, 147

M 33. II. A comparison of radio and optical data

Berkhuijsen, E.M. **127**, 395

M 82

Accurate Optical Positions of M 82 Knots

Bettoni, D., Galletta, G. **113**, 344

The spectral appearance of active galactic nuclei undergoing bursts of star formation

Krügel, E., Tutukov, A., Loose, H. **124**, 89

M 86

A Westerbork map of the core of the Virgo cluster

Kotanyi, C.G., Ekers, R.D. **122**, 267

M 87

Upper Limits of a Cosmic Infrared Background Flux as Determined by X- and Gamma-ray Observations of M 87

Schlickeiser, R., Harwit, M. **107**, 186

A Westerbork map of the core of the Virgo cluster

Kotanyi, C.G., Ekers, R.D. **122**, 267

M 101

The Giant Spiral Galaxy M 101. VIII. Star Formation in H I-H II Associations

Viallefond, F., Goss, W.M., Allen, R.J. **115**, 373

Search for Wolf-Rayet features in the spectra of giant H II regions.

I. Observations in NGC 300, NGC 604, NGC 5457, and He 2-10

D'Odorico, S., Rosa, M., Wampler, E.J. **124**, 154; **53**, 97

MCG-05-32-052

A galaxy with a 3.2×2.2 kpc² H II region surrounding its nucleus

Meaburn, J. **122**, 111

Mk 10

The Detection of Extranuclear Emission Lines in the Seyfert Galaxies Mk 10 and Mk 79

Schulz, H. **115**, 209

Mk 79

The Detection of Extranuclear Emission Lines in the Seyfert Galaxies Mk 10 and Mk 79

Schulz, H. **115**, 209

NGC 253

The spectral appearance of active galactic nuclei undergoing bursts of star formation

Krügel, E., Tutukov, A., Loose, H. **124**, 89

A survey of the distribution of λ 2.8 cm radio continuum in nearby galaxies. IV. NGC 253

Klein, U., Urbanik, M., Beck, R., Wielebinski, R. **127**, 177

NGC 300

Search for Wolf-Rayet features in the spectra of giant H II regions.

I. Observations in NGC 300, NGC 604, NGC 5457, and He 2-10

D'Odorico, S., Rosa, M., Wampler, E.J. **124**, 154; **53**, 97

NGC 315

A search for neutral hydrogen in radio galaxies

Shostak, G.S., van Gorkom, J.H., Ekers, R.D., Sanders, R.H., Goss, W.M., Cornwell, T.J. **119**, L3

NGC 925

The Velocity Field of the Ionized Gas in the Barred Galaxy NGC 925

Marcelin, M., Boulesteix, J., Courtès, G. **108**, 134

NGC 1052

A search for neutral hydrogen in radio galaxies

Shostak, G.S., van Gorkom, J.H., Ekers, R.D., Sanders, R.H., Goss, W.M., Cornwell, T.J. **119**, L3

NGC 1068

The Large Scale Trend of Rotation Curves in the Spiral Galaxies NGC 1068 and NGC 3310

Galletta, G., Recillas-Cruz, E. **112**, 361

The [OIII] electron temperature and density structure in the nucleus of NGC 1068

Walsh, J.R. **123**, 101

NGC 1313

Kinematics and Dynamics of the Barred Spiral Galaxy NGC 1313

Marcelin, M., Athanassoula, E. **105**, 76

Morphology of the ionized gas in NGC 1313

Marcelin, M., Gondoin, P. **119**, 166; **51**, 353

NGC 1316

The large-scale radio structure of Fornax A

Ekers, R.D., Goss, W.M., Wellington, K.J., Bosma, A., Smith, R.M., Schweizer, F. **127**, 361

NGC 1365

The Radio Structure of the Nuclear Region of NGC 1365

Sandqvist, A., Jörsäter, S., Lindblad, P.O. **110**, 336

NGC 1566

The Galaxy NGC 1566: Distribution and Kinematics of the Ionized Gas

Comte, G., Duquenois, A. **114**, 7

NGC 1961

NGC 1961: Stripping of a Supermassive Spiral Galaxy

Shostak, G.S., Hummel, E., Shaver, P.A., van der Hulst, J.M., van der Kruit, P.C. **115**, 293

NGC 2712

Neutral Hydrogen in Two Extremely Isolated Galaxies

*Krumm, N., Shane, W.W. 116, 237***NGC 2903**

Periodic orbits and warps

Mulder, W.A. 121, 91

The velocity field of the ionized gas in NGC 2903

*Marcelin, M., Boulesteix, J., Georgelin, Y. 128, 140***NGC 2911**

VLBI observations of the early-type galaxies NGC 2911 and NGC 4278

*Schilizzi, R.T., Fanti, C., Fanti, R., Parma, P. 126, 412***NGC 3310**

The Large Scale Trend of Rotation Curves in the Spiral Galaxies NGC 1068 and NGC 3310

*Galletta, G., Recillas-Cruz, E. 112, 361***NGC 3351**

On the inner ring of H II regions in NGC 3351

*Alloin, D., Nieto, J.-L. 117, 172; 50, 491***NGC 3379**

High-resolution optical observations of NGC 3379. I. An analysis of previous data

Nieto, J.-L. 125, 176; 53, 247

High-resolution optical observations of NGC 3379. II. On the derivation of the East-West profile

*Nieto, J.-L. 126, 221; 53, 383***NGC 3660**

Nuclear activity in the barred spiral galaxy NGC 3660 from radio, optical, and X-ray observations

*Kollatschny, W., Biermann, P., Fricke, K.J., Huchtmeier, W., Witzel, A. 119, 80***NGC 3893**

Rotation, mass and excitation of the spiral galaxy NGC 3893 (text in French)

*Meyssonnier, N. 119, 325; 51, 429***NGC 3913**

Spectra and Light Curves of Three Recent Supernovae

*Barbon, R., Ciatti, F., Rosino, L., Ortolani, S., Rafanelli, P. 116, 43***NGC 4013**

Surface Photometry of Edge-on Spiral Galaxies. III. Properties of the Three-dimensional Distribution of Light and Mass in Disks of Spiral Galaxies

*van der Kruit, P.C., Searle, L. 110, 61***NGC 4258**

New High Resolution Radio Observations of NGC 4258. III. VLA and WSRT Observations of the Anomalous Arms

*van Albada, G.D., van der Hulst, J.M. 115, 263***NGC 4278**

VLBI observations of the early-type galaxies NGC 2911 and NGC 4278

*Schilizzi, R.T., Fanti, C., Fanti, R., Parma, P. 126, 412***NGC 4321**

Spectra and Light Curves of Three Recent Supernovae

*Barbon, R., Ciatti, F., Rosino, L., Ortolani, S., Rafanelli, P. 116, 43***NGC 4438**

A Westerbork map of the core of the Virgo cluster

*Kotanyi, C.G., Ekers, R.D. 122, 267***NGC 4449**

Further radio observations of the supernova remnant in NGC 4449 and a candidate remnant in NGC 4656

*de Bruyn, A.G. 119, 301***NGC 4490/85**

Observations of the interacting galaxy pair NGC 4490/85

*Klein, U. 121, 150***NGC 4536**

Two Bright Supernovae in NGC 6946 and NGC 4536

*Barbon, R., Ciatti, F., Rosino, L. 116, 35***NGC 4656**

Further radio observations of the supernova remnant in NGC 4449 and a candidate remnant in NGC 4656

*de Bruyn, A.G. 119, 301***NGC 4696**

The elliptical galaxy NGC 4696: CCD observations of an absorbing lane

*Jørgensen, H.E., Nørgaard-Nielsen, H.U., Pedersen, H., Rasmussen, I.L., Schnopper, H. 122, 301***NGC 5236**

Pre-maximum spectra of the supernova in NGC 5236

*Richtler, T., Sadler, E.M. 128, L3***NGC 5301**

Neutral Hydrogen in Two Extremely Isolated Galaxies

*Krumm, N., Shane, W.W. 116, 237***NGC 5383**

Photometry, kinematics, and dynamics of the barred spiral galaxy NGC 5383

*Duval, M.F., Athanassoula, E. 121, 297***NGC 6822**

Discovery of a Wolf-Rayet star in NGC 6822

*Westerlund, B.E., Azzopardi, M., Breysacher, J., Lequeux, J. 123, 159***NGC 6946**A Survey of the Distribution of λ 2.8 cm Radio Continuum in Nearby Galaxies. II. NGC 6946*Klein, U., Beck, R., Buczylowski, U.R., Wielebinski, R. 108, 176*

Optical Study of NGC 6946 (in French)

Peton, A. **114**, 1

Spectra of SN 1980*k* in NGC 6946

Barbieri, C., Bonoli, C., Cristiani, S. **114**, 216

Two Bright Supernovae in NGC 6946 and NGC 4536

Barbon, R., Ciatti, F., Rosino, L. **116**, 35

Spectra and Light Curves of Three Recent Supernovae

Barbon, R., Ciatti, F., Rosino, L., Ortolani, S., Rafanelli, P. **116**, 43

NGC 7814

Surface Photometry of Edge-on Spiral Galaxies. IV. The Distribution of Light, Colour, and Mass in the Disk and Spheroid of NGC 7814

van der Kruit, P.C., Searle, L. **110**, 79

NGC 4217

Surface Photometry of Edge-on Spiral Galaxies. III. Properties of the Three-dimensional Distribution of Light and Mass in Disks of Spiral Galaxies

van der Kruit, P.C., Searle, L. **110**, 61

NGC 4501

Surface Photometry of the Spiral Galaxy NGC 4501

Send, U. **112**, 235

NGC 5023

Surface Photometry of Edge-on Spiral Galaxies. III. Properties of the Three-dimensional Distribution of Light and Mass in Disks of Spiral Galaxies

van der Kruit, P.C., Searle, L. **110**, 61

NGC 5907

Surface Photometry of Edge-on Spiral Galaxies. III. Properties of the Three-dimensional Distribution of Light and Mass in Disks of Spiral Galaxies

van der Kruit, P.C., Searle, L. **110**, 61

NGC 7673

Recent Star-forming Activity in the Clumpy Irregular Galaxy NGC 7673

Duflot-Augarde, R., Alloin, D. **112**, 257

Seyfert's Sextet

Analysis of optical imagery for Seyfert's Sextet and VV 172

Sulentic, J.W., Lorre, J.J. **120**, 36

VV 172

Analysis of optical imagery for Seyfert's Sextet and VV 172

Sulentic, J.W., Lorre, J.J. **120**, 36

3 C 31

Multifrequency Comparison of the Total Intensity and Polarization Distributions for 3 C 31, 3 C 66 B, and 3 C 129

van Breugel, W. **110**, 225

Multifrequency WSRT observations of the radio galaxy 3 C 31

Strom, R.G., Fanti, R., Parma, P., Ekers, R.D. **122**, 305

3 C 66

Multifrequency Comparison of the Total Intensity and Polarization Distributions for 3 C 31, 3 C 66 B, and 3 C 129

van Breugel, W. **110**, 225

3 C 129

Multifrequency Comparison of the Total Intensity and Polarization Distributions for 3 C 31, 3 C 66 B, and 3 C 129

van Breugel, W. **110**, 225

One-sided ejection in the prototype tailed radio galaxy 3 C 129?

Jägers, W.J., de Grijp, M.H.K. **127**, 235

3 C 130

The cluster around 3 C 130

Jägers, W.J. **125**, 172

3C293

A search for neutral hydrogen in radio galaxies

Shostak, G.S., van Gorkom, J.H., Ekers, R.D., Sanders, R.H., Goss, W.M., Cornwell, T.J. **119**, L3

Galaxies, Optical Observations, see also Galaxies

NGC 1809 and PKS 0502-696

West, R.M. **71**, 262

Eight Southern Galaxies with Strong Emission-line Spectra

Lauberts, A., Bergvall, N.A.S., Ekman, A.B.G., Westerlund, B.E. **71**, 270; **35**, 55

An Optical Study of the Galaxy M 101. Derivation of a Mass Model from the Kinematic of the Gas

Comte, G., Monnet, G., Rosado, M. **72**, 73

The Angular Size of Elliptical Galaxies

Frandsen, S., Thomsen, B. **72**, 111

Properties of the Galaxy and the Nucleus of the Radiosource 3 C 120

Wlérick, G., Westerlund, B., Garnier, R. **72**, 277

Dust and Young Stars in the Lenticular Galaxy NGC 5102

Danks, A.C., Laustsen, S., van Woerden, H. **73**, 247

A Spectroscopic Survey of the Blue Compact Zwicky Galaxies

Kunth, D., Sargent, W.L.W. **73**, 369; **36**, 259

Optically Variable Quasars and Bright Galaxies

Nieto, J.L. **74**, 152

UBV Photometry of Southern Galaxies

Dottori, H.A. **76**, 369; **37**, 519

Rotation and Mass of NGC 2776

Carozzi-Meyssonier, N. **76**, 369; **37**, 529

A Morphological Study of 15 Blue Dwarf Galaxies

Barbieri, C., Bonoli, C., Rafanelli, P. **76**, 369; **37**, 541

Narrow Band Photography of NGC 5128

Möllenhoff, C. **77**, 141

Optical Surface Photometry of Eight Spiral Galaxies Studied in Westerborg

van der Kruit, P.C. **77**, 371; **38**, 15

Nitrogen and Oxygen Abundances in Galaxies

Alloin, D., Collin-Souffrin, S., Joly, M., Vigroux, L. **78**, 200

Image Tube Spectrograms of NGC 5128 (Cen A)

Appenzeller, I., Möllenhoff, C. **81**, 54

A Catalogue of Emission Regions in M 33

Sabbadin, F., Rafanelli, P., Bianchini, A. **81**, 389; **39**, 97

An Exploratory Investigation of the Near Nuclear H II Regions in NGC 3310

Heckman, T.M., Balick, B. **83**, 100

The Reddening Law and Dust Content in Nearby Extragalactic Systems

Isserstedt, J. **83**, 317

Photoelectric Surface Photometry of the Andromeda Nebula

Hoessel, J.G., Melnick, J. **84**, 317

- IUE UV Spectra of Giant Extragalactic HII Regions
Rosa, M. **85**, L21
- The Interest of High Spatial Resolution Observations of Presumed Metal-rich HII Regions
Stasińska, G. **85**, 359
- On the Core-Halo Structure of NGC 604
Melnick, J. **86**, 304
- On the Nature of VV 493 = UGC 07910
Sulentic, J.W. **88**, 94
- Star Formation and Activity in the Nuclei of Barred Galaxies
Heckman, T.M. **88**, 365
- Spectroscopic Observations of Galactic Nebulae and Galaxies with the Imaging Photon Counting System (IPCS)
Hua, C.T., Donas, J., Doan, N.H. **90**, 8
- Rotation and Mass of NGC 2976
Carozzi-Meyssonier, N. **92**, 189
- Spectroscopic Observations of HII Regions in NGC 5128. I. Radial Velocities
Möllenhoff, C. **93**, 248
- Radial Velocities of Ten Shapley-Ames Galaxies Not Hitherto Observed
West, R.M. **95**, 1
- ESO 255-IG 07, a Compact Group of Interacting Galaxies
Bergvall, N., Ekman, A., Lauberts, A. **95**, 266
- Bi-Dimensional H α Photometry Over the Nuclear Region of NGC 1068
Allain, D., Laques, P., Pelat, D., Despiiau, R. **95**, 394; **43**, 231
- Optical and Near Infrared Photometry of Spiral Galaxies: M33, M74, M81
Guidoni, U., Messi, R., Natali, G. **96**, 215
- The Kinematics of the Nuclear Spiral of the Barred Galaxy NGC 1512
Lindblad, P.O., Jörsäter, S. **97**, 56
- How to Find a Seyfert Nucleus Hidden by a Normal HII Region
Véron, P., Véron, M.P., Bergeron, J., Zuidervijk, E.J. **97**, 71
- On Roche Limit in a Galaxy
Robe, H. **97**, 182
- A Photoelectric Sequence in the Region of the Sculptor Galaxy NGC 253
Alcaino, G. **97**, 201
- Predicted Redshifts of Galaxies by Broadband Photometry
Butchins, S.A. **97**, 407
- A Spectroscopic Survey of Emission-line Objects in Two Fields
Kunth, D., Sargent, W.L.W., Kowal, C. **99**, 403; **44**, 229
- Observations of Wolf-Rayet Stars in the Emission-line Galaxy Tololo 3
Kunth, D., Sargent, W.L.W. **101**, L5
- Small-scale Structure of the Core of M33 (NGC 598)
Hua, C.T., Nguyen-Trong, T. **101**, 187
- The Mild Abundance Gradient of NGC 1365
Allain, D., Edmunds, M.G., Lindblad, P.O., Pagel, B.E.J. **101**, 377
- Light Distribution, Inclination, and Mass Distribution of M 51
Monnet, G., Paturel, G., Simien, F. **102**, 119
- Spectroscopic and Photometric Observations of Galaxies from the ESO/Uppsala List. Third Catalogue
West, R.M., Surdej, J., Schuster, H.-E., Muller, A.B., Laustsen, S., Borchkhadze, T.M. **103**, 208; **46**, 57
- Preliminary Stellar Photographic Photometry in the Sculptor Dwarf Irregular Galaxy (SDIG)
Lequeux, J., West, R.M. **103**, 319
- Multidimensional Statistical Analysis of Normal Galaxies
Bujarrabal, V., Guibert, J., Balkowski, C. **104**, 1
- [O III]/H β Ratios of Emission Regions in the Arms and Disk of M 33 and Luminosity Functions at the Fronts of the Arms
Boulesteix, J., Dubout-Crillon, R., Monnet, G. **104**, 15
- The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky. IX
Lauberts, A., Holmberg, E.B., Schuster, H.-E., West, R.M. **104**, 172; **46**, 311
- The Line Spectrum of Fe II Seyfert I Galaxy Akn 120
Kollatschny, W., Schleicher, H., Fricke, K.J., Yorke, H.W. **104**, 198
- A New Bright Compact Galaxy in Ursa Major
Barbieri, C., Cristiani, S., Romano, G. **105**, 369
- Wolf-Rayet Stars in Extragalactic HII Regions: Discovery of a Peculiar WR in IC 1613/ 3
D'Odorico, S., Rosa, M. **105**, 410
- The Very Large, Interacting Galaxy Pair IC 5174/75
West, R.M., Barbier, R. **106**, 53
- The Optical Halo Around NGC 253
Beck, R., Hutschenreiter, G., Wielebinski, R. **106**, 112
- Spectroscopic Observations of Spheroidal Systems: The Bulges of M 81, NGC 4736, and the Dwarf Elliptical M 32
Pellet, A., Simien, F. **106**, 214
- Rotation and Mass of NGC 672 and IC 1727 (Text in French)
Carozzi-Meyssonier, N. **106**, 379; **47**, 237
- Search for (Globular) Clusters in M31. II: Photographic photometry of the Candidates in a 70' Square Field Centered on M31
Buonanno, R., Corsi, C.E., Battistini, P., Bónoli, F., Fusi Pecci, F. **107**, 412; **47**, 451
- A Complete Sample of Virgo Cluster Galaxies
Kraan-Korteweg, R.C. **107**, 414; **47**, 505
- Influence of Ellipticity on Photometric Profiles of Elliptical Galaxies
Nieto, J.L. **107**, 415; **47**, 535
- The Optical Spectrum of the Radio Galaxy PKS 2152-69
Marenbach, G., Appenzeller, I. **108**, 95
- Rotation of the Dust Lane in NGC 1947
Möllenhoff, C. **108**, 130
- The Velocity Field of the Ionized Gas in the Barred Galaxy NGC 925
Marcelin, M., Boulesteix, J., Courtès, G. **108**, 134
- Wolf-Rayet Stars in Extragalactic HII Regions. II. NGC 604 — a Giant HII Region Dominated by Many Wolf-Rayet Stars
Rosa, M., D'Odorico, S. **108**, 339
- High-resolution Observations of M 87. I. The Morphology of the Jet
Nieto, J.-L., Lelièvre, G. **109**, 95
- Surface Photometry of Edge-on Spiral Galaxies. III. Properties of the Three-dimensional Distribution of Light and Mass in Disks of Spiral Galaxies
van der Kruit, P.C., Searle, L. **110**, 61
- Surface Photometry of Edge-on Spiral Galaxies. IV. The Distribution of Light, Colour, and Mass in the Disk and Spheroid of NGC 7814
van der Kruit, P.C., Searle, L. **110**, 79
- Redshifts of Parent Galaxies of Supernovae
Barbon, R., Capaccioli, M., West, R.M., Barbier, R. **111**, 210; **49**, 73
- Intermediate Band Filter Spectrophotometry of Bright Galaxies. I. Observations
Solheim, J.E., de Vaucouleurs, G., de Vaucouleurs, A. **111**, 212; **49**, 109
- New UBV Parameters for 46 E-SO Galaxies in the Virgo Cluster
Michard, R. **112**, 180; **49**, 591

- Surface Photometry of the Spiral Galaxy NGC 4501
Send, U. **112**, 235
- Recent Star-forming Activity in the Clumpy Irregular Galaxy NGC 7673
Duflot-Augarde, R., Alloin, D. **112**, 257
- The Large Scale Trend of Rotation Curves in the Spiral Galaxies NGC 1068 and NGC 3310
Galletta, G., Recillas-Cruz, E. **112**, 361
- A New Ring Galaxy in Canes Venatici
Brosch, N. **112**, 388
- Detailed Bibliography on the Surface Photometry of Galaxies
Davoust, E., Pence, W.D. **112**, 394; **49**, 631
- Are All Galactic Nuclear Regions Sodium Rich?
Véron-Cetty, M.P., Véron, P., Tarengchi, M. **113**, 46
- Accurate Optical Positions of M 82 Knots
Bettoni, D., Galletta, G. **113**, 344
- Optical Study of NGC 6946 (in French)
Peton, A. **114**, 1
- The Galaxy NGC 1566: Distribution and Kinematics of the Ionized Gas
Comte, G., Duquennoy, A. **114**, 7
- The Detection of Extranuclear Emission Lines in the Seyfert Galaxies Mk 10 and Mk 79
Schulz, H. **115**, 209
- Photographic Photometry of Galaxies Using the INMP. I. The Lenticulars NGC 404 and NGC 524
Barbon, R., Capaccioli, M., Rampazzo, R. **115**, 388
- Intermediate band filter spectrophotometry of bright galaxies. II. Data reductions
Solheim, J.-E., de Vaucouleurs, G. **117**, 171; **50**, 283
- On the inner ring of H II regions in NGC 3351
Alloin, D., Nieto, J.-L. **117**, 172; **50**, 491
- On the methods for determining galaxy velocity dispersions
Larsen, N., Nørgaard-Nielsen, H.U., Kjaergaard, P., Dickens, R.J. **117**, 257
- Calibrated B, V surface photometry of X-ray cD galaxies
Valentijn, E.A. **118**, 123
- NGC 6240: A unique interacting galaxy
Fried, J.W., Schulz, H. **118**, 166
- Nuclear activity in the barred spiral galaxy NGC 3660 from radio, optical, and X-ray observations
Kollatschny, W., Biermann, P., Fricke, K.J., Huchtmeier, W., Witzel, A. **119**, 80
- Morphology of the ionized gas in NGC 1313
Marcelin, M., Gondoin, P. **119**, 166; **51**, 353
- H II regions in M 33. I. Radio and H α observations of the H II complex NGC 595
Viallefond, F., Donas, J., Goss, W.M. **119**, 185
- Rotation, mass and excitation of the spiral galaxy NGC 3893 (text in French)
Meyssonnier, N. **119**, 325; **51**, 429
- Analysis of optical imagery for Seyfert's Sextet and VV 172
Sulentic, J.W., Lorre, J.J. **120**, 36
- The origin of the nonthermal radio emission in normal disk galaxies
Kennicutt, R. **120**, 219
- Photometry, kinematics, and dynamics of the barred spiral galaxy NGC 5383
Duval, M.F., Athanassoula, E. **121**, 297
- A galaxy with a 3.2×2.2 kpc² H II region surrounding its nucleus
Meaburn, J. **122**, 111
- The elliptical galaxy NGC 4696: CCD observations of an absorbing lane
Jørgensen, H.E., Nørgaard-Nielsen, H.U., Pedersen, H., Rasmussen, I.L., Schnopper, H. **122**, 301
- Discovery of a Wolf-Rayet star in NGC 6822
Westerlund, B.E., Azzopardi, M., Breysacher, J., Lequeux, J. **123**, 159
- Search for Wolf-Rayet features in the spectra of giant H II regions. I. Observations in NGC 300, NGC 604, NGC 5457, and He 2-10
D'Odorico, S., Rosa, M., Wampler, E.J. **124**, 154; **53**, 97
- Are galaxy properties specific for their parent clusters?
Kraan-Korteweg, R.C. **125**, 109
- High-resolution optical observations of NGC 3379. I. An analysis of previous data
Nieto, J.-L. **125**, 176; **53**, 247
- A catalogue of late-type supergiant stars in the Small Magellanic Cloud
Prévot, L., Martin, N., Maurice, E., Rebeiro, E., Rousseau, J. **125**, 176; **53**, 255
- Estimated energy and momentum input to the interstellar medium for several external galaxies
Tarrab, I. **125**, 308
- Galaxies rotation curves: a catalogue
Baiesi-Pillastrini, G.C., Palumbo, G.G.C., Vettolani, G. **126**, 221; **53**, 373
- High-resolution optical observations of NGC 3379. II. On the derivation of the East-West profile
Nieto, J.-L. **126**, 221; **53**, 383
- A modified method to calibrate photographic surface photometry of galaxies and nebulae
Feitzinger, J.V., Nicolov, A., Schmidt-Kaler, T., Tennigkeit, J. **126**, 352
- Galaxies, Radio Observations**, see also Galaxies, Radio Frequency Lines: 21 cm Line
- A Complex Radio Source in the Center of Abell 2218
Schallwisch, D., Wielebinski, R. **71**, L15
- The Structure and Identification of 3 C 105
Willis, A.G., Schilizzi, R.T. **71**, 253
- Accurate 21-cm H I Spectra of Four Small Galaxies
Allen, R.J., Shostak, G.S. **71**, 272; **35**, 163
- Observations of 3 C 31 at 2.7, 4.8, and 10.7 GHz
Klein, U., Wielebinski, R. **72**, 229
- Analysis of Galaxy Neutral Hydrogen Spectra
Newman, W.I. **73**, 37
- A Multi-frequency Radio Continuum Study of the Edge-on Galaxy NGC 3556
de Bruyn, A.G., Hummel, E. **73**, 196
- Radio Emission from NGC 4319 and Markarian 205
Willis, A.G. **73**, 354
- The Giant Spiral Galaxy M 101: V. A Complete Synthesis of the Distribution and Motions of the Neutral Hydrogen
Allen, R.J., Goss, W.M. **73**, 366; **36**, 135
- A Study of the Radio Galaxies 3 C 111, 192, 219, 223, 315, and 452
Högbom, J.A. **73**, 368; **36**, 173
- Detection of Extragalactic Ammonia
Martin, R.N., Ho, P.T.P. **74**, L7
- Westerbork Observations of Flat Spectrum Radio Galaxies in the 5 GHz "S4" Survey
Kapahi, V.K. **74**, L11
- Neutral Hydrogen Observation of the Edge on Disk Galaxy NGC 891
Sancisi, R., Allen, R.J. **74**, 73

- The Radio Continuum Halo of M 87
Andernach, H., Baker, J.R., Kap-Herr, A. von, Wielebinski, R. **74**, 93
- The Kinematics of the Lenticular Galaxies NGC 1291 and NGC 1326 from 21 cm Line Observations
Mebold, U., Goss, W.M., Woerden, H. van, Hawarden, T.G., Siegman, B. **74**, 100
- Extended Envelope of Neutral Hydrogen around M 101
Huchtmeier, W.K., Witzel, A. **74**, 138
- Radio Observations of NGC 3665: An Elliptical Galaxy with a Dust Lane
Kotanyi, C.G. **74**, 156
- H I Observations of SO Galaxies
Biermann, P., Clarke, J.N., Fricke, K.J. **75**, 7
- The Giant H I-Envelope of the Irregular Galaxy IC 10
Huchtmeier, W.K. **75**, 179
- Considerations of the Spectra of 3 CR Radio Sources
Horstman, H.M., Cavallo, G. **75**, 240
- Studies of Polarization at 1.4 GHz of 66 Low Luminosity Radio Galaxies
Gioia, I.M., Gregorini, L. **75**, 259; **36**, 347
- Variability of Extragalactic Radiosources at 408 MHz. Results of a 3 Year Monitoring Program
Fanti, R., Ficarra, A., Mantovani, F., Padrielli, L., Weiler, K. **75**, 259; **36**, 359
- Morphology of an Emission-line Nebulosity Associated with 3 C 120
Heckman, T., Balick, B. **76**, L7
- VLA Observations of the Extended Radio Core in 3 C 236
Fomalont, E.B., Miley, G.K., Bridle, A.H. **76**, 106
- High Resolution Observations of the Compact Central Component in the Giant Radio Source 3 C 236
Schilizzi, R.T., Miley, G.K., van Ardenne, A., Baud, B., Baath, L., Rönnäng, B.O., Pauliny-Toth, I.I.K. **77**, 1
- Radio Continuum Observations of NGC 891 and NGC 253 at 8.7 GHz
Beck, R., Biermann, P., Emerson, D.T., Wielebinski, R. **77**, 25
- The "Papillon" Radio Galaxy IC 708
Vallée, J.P., Wilson, A.S., Van der Laan, H. **77**, 183
- A Search for Radio Recombination Lines from Galaxies and Quasars
Churchwell, E., Shaver, P.A. **77**, 316
- VLBI Observations of Compact Components in Extended Radio Sources
Kapahi, V.K., Schilizzi, R.T. **77**, 371; **38**, 11
- Observations of Carbon Monoxide Isotopes in External Galaxies
Encrenaz, P.J., Stark, A.A., Combes, F., Wilson, R.W. **78**, L1
- H I Large-scale Distribution in Some Early Type Galaxies
Balkowski, C. **78**, 190
- Neutral Hydrogen Observations of the Barred Spiral Galaxy NGC 5383
Sancisi, R., Allen, R.J., Sullivan III, W.T. **78**, 217
- A Companion for IC 342
Rots, A.H. **80**, 255
- Accurate H I Profiles of Several Nearby Galaxies
Shostak, G.S., Allen, R.J. **81**, 167
- Radio Continuum Observations of Markarian Galaxies at 1410, 2380, and 5000 MHz
Biermann, P., Clarke, J.N., Fricke, K.J., Pauliny-Toth, I.I.K., Schmidt, J., Witzel, A. **81**, 235
- Continuum Observations at 2695 MHz in the Area of 3 C 27
Salter, C.J., Haslam, C.G.T. **81**, 240
- A Neutral Hydrogen Survey of NGC 2685
Shane, W.W. **82**, 314
- New High Resolution Radio Observations of NGC 4 258. I. The Observations
van Albada, G.D. **82**, 395; **39**, 283
- A Westerbork Map of Virgo A at 610 MHz
Kotanyi, C. **83**, 245
- Multifrequency Observations of Very Large Radio Galaxies. II. 3C 236
Strom, R.G., Willis, A.G. **85**, 36
- 3-cm Observations of Galaxies
Pfleiderer, J., Boden, H., Gebler, K.-H. **86**, 268; **40**, 351
- Neutral Hydrogen Study of 40 Sa Spiral Galaxies
Bottinelli, L., Gouguenheim, L., Paturel, G. **88**, 32
- A Radio Continuum Survey of Bright Galaxies at 1415 MHz
Hummel, E. **88**, 282; **41**, 151
- A Neutral Hydrogen Mapping Survey of Large Galaxies. I. Observations
Rots, A.H. **88**, 283; **41**, 189
- The Radio Continuum Emission from Spiral Galaxies in Double Systems
Hummel, E. **89**, L1
- The Warped Sb-Galaxy NGC 4565
Huchtmeier, W.K., Seiradakis, J.H., Tammann, G.A. **89**, 95
- Spectral Properties of Ooty Occultation Radio Sources
Gopal-Krishna, Steppe, H., Witzel, A. **89**, 169
- An Analysis of the Cosmological Evolution of Radio Sources. I. Spectral-index Dependent Counts of Sources and Spectral Index Distributions at 1400 MHz
Machalski, J. **89**, 251; **41**, 323
- Radio Observations of a Complete Sample of Spiral Galaxies at 408 MHz
Gioia, I.M., Gregorini, L. **89**, 252; **41**, 329
- A Radio Continuum Survey at 1.4 GHz of the Galaxies in the Virgo Region
Kotanyi, C.G. **89**, 253; **41**, 421
- One-sided Jets in Extragalactic Radiosources
van Groningen, E., Miley, G.K., Norman, C.A. **90**, L7
- New High Resolution Radio Observations of NGC 4258. II. NGC 4258 as a Spiral Galaxy
van Albada, G.D. **90**, 123
- Radio Observations of H II Regions in External Galaxies. III. Thermal Emission, H II Regions and Star Formation in 14 Late-type Galaxies
Israel, F.P. **90**, 246
- Search for H₂O Maser Emission in Nearby Galaxies
Huchtmeier, W.K., Richter, O.-G., Witzel, A., Pauliny-Toth, I. **91**, 259
- Late-type Galaxies with Extended Envelopes of Neutral Hydrogen
Huchtmeier, W.K., Seiradakis, J.H., Materne, J. **91**, 341
- Radio Observations at 408 MHz of E and SO Nearby Galaxies
Feretti, L., Giovannini, G. **92**, 296
- The Giant Spiral Galaxy M 101. VI. The Large Scale Radial Velocity Field
Bosma, A., Goss, W.M., Allen, R.J. **93**, 106
- Further Observations of the Head-tail Radio Galaxy PKS 2247 + 11
Robertson, J.G. **93**, 113
- A Survey of the Distributions of 2.8 cm Radio Continuum in Nearby Galaxies. I. Observations of 16 Spirals
Klein, U., Emerson, D.T. **94**, 29

- The Polarization of the Tail Radio Source B2 1615+35. A Discussion of the Physical Conditions and Acceleration Mechanism in a Tail Radio Source
Fanti, R., Lari, C., Parma, P., Ekers, R.D. **94**, 61
- Linear Polarization Observations of Extragalactic Radio Sources at λ 2 cm and at 17-19 cm
Simard-Normandin, M., Kronberg, P.P., Neidhöfer, J. **95**, 208; **43**, 19
- A 4850 MHz Survey of the 5 C 6 Area
Maslowski, J., Pauliny-Toth, I.I.K., Witzel, A., Kühr, H. **95**, 285
- Radio Continuum of the Barred Spiral Galaxy NGC 5383 at Centimetre Wavelengths
Gräve, R., Klein, U., Wielebinski, R. **95**, 391
- A Radio Survey of Clusters of Galaxies IV. 11.1 cm Observations of 19 Abell Clusters in Total Intensity and Polarization
Andernach, H., Schallwisch, D., Haslam, C.G.T., Wielebinski, R. **95**, 393; **43**, 155
- A Study of the 4C Catalogue of Radiosources Between Declinations 20° and 40° III - 2700 and 5000 MHz Flux Density Measurements
Véron, M.P., Véron, P., Pauliny-Toth, I.I.K., Witzel, A. **95**, 393; **43**, 195
- A Complete Sample of Spiral and Irregular Galaxies Detected at 408 MHz: the Radio Luminosity Function and Other Properties
Gioia, I.M., Gregorini, L., Vettolani, G. **96**, 58
- VLBI Observations of a Mixed Selection of Extra-galactic Objects
van Breugel, W.J.M., Schilizzi, R.T., Hummel, E., Kapahi, V.K. **96**, 310
- Multifrequency Observations of Extended Radio Galaxies. IV. The Large Radio Jet Galaxy 4CT 74.17.1
van Breugel, W.J.M., Willis, A.G. **96**, 332
- An H I Synthesis Study of the Galaxy/QSO Pair NGC 6503/1749+70.1
Shostak, G.S., Willis, A.G., Crane, P.C. **96**, 393
- The H I Content of Isolated Galaxies
Balkowski, Ch., Chamaraux, P. **97**, 223
- Search for Low Frequency Variability in a Complete Sample of Extragalactic Radiosources
Fanti, C., Ficarra, A., Gregorini, L., Mantovani, F., Olori, M.C. **97**, 251
- VLBI Observations of Selected Galaxies
Graham, D.A., Weiler, K.W., Wielebinski, R. **97**, 388
- Westerbork Observations of Radio Sources in the 5 GHz 'S4' Survey
Kapahi, V.K. **97**, 416; **43**, 381
- Étude photométrique et cinématique du système double NGC 4485-4490
Duval, M.F. **98**, 352
- The Extended H I-envelope of NGC 5236 (M83)
Huchtmeier, W.K., Bohnenstengel, H.-D. **100**, 72
- A 408 MHz All-sky Continuum Survey. I. Observations at Southern Declinations and for the North Polar Region
Haslam, C.G.T., Klein, U., Salter, C.J., Stoffel, H., Wilson, W.E., Cleary, M.N., Cooke, D.J., Thomasson, P. **100**, 209
- Distribution of Molecular Gas in Three Face-on Galaxies
Rickard, L.J., Palmer, P. **102**, L13
- H I Observations of Galaxies in the Galactic Plane
Pfleiderer, J., Gruber, M.D., Gruber, G.M., Velden, L. **102**, L21
- Westerbork 5 GHz Observations of Head-tail Radio Sources in A 2022, A 2256, and A 2462
Valentijn, E.A. **102**, 53
- The Neutral Hydrogen Distribution of Irregular Galaxies
Huchtmeier, W.K., Seiradakis, J.H., Materne, J. **102**, 134
- A Catalogue of Extragalactic Radio Sources having Flux Densities Greater than 1 Jy at 5 GHz
Kühr, H., Witzel, A., Pauliny-Toth, I.I.K., Nauber, U. **102**, 280; **45**, 367
- Observations of the Head-tail Radio Galaxy NGC 3862 (3C 264) at 0.6, 1.4, and 5.0 GHz
Gavazzi, G., Perola, G.C., Jaffe, W. **103**, 35
- Multidimensional Statistical Analysis of Normal Galaxies
Bujarrabal, V., Guibert, J., Balkowski, C. **104**, 1
- Centimetre Wavelengths Radio Studies of Clumpy Irregular Galaxies
Heidmann, J., Klein, U., Wielebinski, R. **105**, 188
- The Distribution of Thermal and Nonthermal Radio Continuum Emission of M31
Beck, R., Gräve, R. **105**, 192
- Observations of NGC 604 over Six Decades in Frequency
Israel, F.P., Gatley, I., Matthews, K., Neugebauer, G. **105**, 229
- The Magnetic Field in M 31
Beck, R. **106**, 121
- A 408 MHz All-sky Continuum Survey. II. The Atlas of Contour Maps
Haslam, C.G.T., Salter, C.J., Stoffel, H., Wilson, W.E. **106**, 181; **47**, 1
- H I Line Studies of Galaxies: I-General Catalogue of 21-cm Line Data
Bottinelli, L., Gouguenheim, L., Paturel, G. **106**, 182; **47**, 171
- The Radio Continuum Properties of SO Galaxies
Hummel, E., Kotanyi, C.G. **106**, 183
- Neutral Hydrogen Observations of Double Spiral Galaxies. I. NGC 5905 and NGC 5908
van Moorsel, G.A. **107**, 66
- A Survey of the Distribution of λ 2.8 cm Radio Continuum in Nearby Galaxies. II. NGC 6946
Klein, U., Beck, R., Buczylowski, U.R., Wielebinski, R. **108**, 176
- A 21 cm Hydrogen Line Survey of the Small Magellanic Cloud
Bajaja, E., Loiseau, N. **108**, 415; **48**, 71
- H I-Observations of Galaxies in the Pegasus I Cluster
Richter, O.-G., Huchtmeier, W.K. **109**, 155
- Extended H I-envelopes Around Spiral Galaxies: NGC 2655 and NGC 2715
Huchtmeier, W.K., Richter, O.-G. **109**, 331
- Global Properties of Sa-galaxies from H I-observations
Huchtmeier, W.K. **110**, 121
- Multifrequency High Resolution Observations of the Large Radio Galaxy B2 1321+31
Fanti, R., Lari, C., Parma, P., Bridle, A.H., Ekers, R.D., Fomalont, E.B. **110**, 169
- The Radio Structure of the Nuclear Region of NGC 1365
Sandqvist, A., Jörsäter, S., Lindblad, P.O. **110**, 336
- High Resolution H I Observations of Messier 31
Bajaja, E., Shane, W.W. **112**, 396; **49**, 745
- Study of Spiral Galaxies from 392 New Measurements of 21-cm Line Data
Bottinelli, L., Gouguenheim, L., Paturel, G. **113**, 61
- Spectrophotometry of Wolf-Rayet Star Candidates in M 33
Wampler, E.J. **114**, 165
- 21 cm Line Observations of cD Galaxies
Valentijn, E.A., Giovanelli, R. **114**, 208
- VLBI Observations of the Core Sources of a Sample of Spiral Galaxies
Hummel, E., Fanti, C., Parma, P., Schilizzi, R.T. **114**, 400

21-cm Line Profiles of 392 Spiral Galaxies

Bottinelli, L., Gouguenheim, L., Paturel, G. **114**, 421; **50**, 101

A 1415 MHz Survey of Seyfert and Related Galaxies. III

Wilson, A.S., Meurs, E.J.A. **115**, 217; **50**, 217

New High Resolution Radio Observations of NGC 4258. III.

VLA and WSRT Observations of the Anomalous Arms

van Albada, G.D., van der Hulst, J.M. **115**, 263

NGC 1961: Stripping of a Supermassive Spiral Galaxy

Shostak, G.S., Hummel, E., Shaver, P.A., van der Hulst, J.M., van der Kruit, P.C. **115**, 293

Radio Continuum Emission: A Tracer for Star Formation

Klein, U. **116**, 175

Neutral Hydrogen in Two Extremely Isolated Galaxies

Krumm, N., Shane, W.W. **116**, 237

A radio continuum survey of M 31 at 4850 MHz. I. Observations; list of sources

Berkhuijsen, E.M., Wielebinski, R., Beck, R. **117**, 141

An H I survey of southern galaxies

Reif, K., Mebold, U., Goss, W.M., van Woerden, H., Siegman, B. **117**, 172; **50**, 451

A survey of the distribution of λ 2.8 cm radio continuum in nearby galaxies. III. A small sample of irregular and blue compact galaxies

Klein, U., Gräve, R., Wielebinski, R. **117**, 332

A search for neutral hydrogen in radio galaxies

Shostak, G.S., van Gorkom, J.H., Ekers, R.D., Sanders, R.H., Goss, W.M., Cornwell, T.J. **119**, L3

408 MHz Observations of clusters of galaxies. II. The Coma and Perseus superclusters

Ballarati, B., Feretti, L., Gavazzi, G., Giovannini, G., Nanni, M. **119**, 165; **51**, 321

21-cm line observations of 59 lenticular and spiral galaxies

Balkowski, C., Chamaraux, P. **119**, 165; **51**, 331

H II regions in M 33. I. Radio and H α observations of the H II complex NGC 595

Viallefond, F., Donas, J., Goss, W.M. **119**, 185

Further radio observations of the supernova remnant in NGC 4449 and a candidate remnant in NGC 4656

de Bruyn, A.G. **119**, 301

The origin of the nonthermal radio emission in normal disk galaxies

Kennicutt, R. **120**, 219

Observations of the interacting galaxy pair NGC 4490/85

Klein, U. **121**, 150

Measurement of unambiguous rotation measures of extragalactic sources

Rudnick, L., Zukowski, E., Kronberg, P.P. **121**, 332; **52**, 317

A Westerbork map of the core of the Virgo cluster

Kotanyi, C.G., Ekers, R.D. **122**, 267

Effective H I diameters of galaxies

Fouqué, P. **122**, 273

Multifrequency WSRT observations of the radio galaxy 3C 11

Strom, R.G., Fanti, R., Parma, P., Ekers, R.D. **122**, 305

A sample of 25 extragalactic radio sources having a spectrum peaked around 1 GHz

Gopal-Krishna, Patnaik, A.R., Steppe, H. **123**, 107

WRST radio observations at 1.4 GHz of 22 Abell clusters of distance class 5

Fanti, C., Fanti, R., Feretti, L., Gioia, I.M., Giovannini, G., Gregorini, L., Marano, B., Padrielli, L., Parma, P., Tomasi, P. **123**, 359; **52**, 411

Are galaxy properties specific for their parent clusters?

Kraan-Korteweg, R.C. **125**, 109

The cluster around 3C 130

Jägers, W.J. **125**, 172

A catalogue of extragalactic radio source identifications

Véron-Cetty, M.P., Véron, P. **125**, 175; **53**, 219

Neutral hydrogen observations of double spiral galaxies. II. NGC 3958/3963, NGC 5289/5290, NGC 5673/IC 1029, NGC 5107/5112

van Moorsel, G.A. **125**, 176; **53**, 271

Galaxies rotation curves: a catalogue

Baiesi-Pillastrini, G.C., Palumbo, G.G.C., Vettolani, G. **126**, 221; **53**, 373

A model for BL Lac-type low frequency variables

Salvati, M., Fanti, R. **128**, 165

Galaxy, see Galactic ...

Galilean Satellites, see Satellites of Planets

Gamma Ray Radiation and Sources

The Results of Limitations on the X-ray Source Size on Gamma Radiation from 3C 273

McBreen, B. **71**, L19

Gamma-ray Spectra Expected from Pulsars

Massaro, E., Salvati, M. **71**, 51

Gamma Rays from Accretion Onto Rotating Black Holes

Collins, M.S. **74**, 108

On the Nature of the Galactic Gamma-ray Sources

Panagia, N., Zamorani, G. **75**, 303

The Large Scale Structure of the Galactic Gamma-ray Emissivity

Caraveo, P.A., Paul, J.A. **75**, 340

Evidence for Periodicity in a Gamma Ray Burst

Barat, C., Chambon, G., Hurley, K., Niel, M., Vedrenne, G., Estulin, I.V., Kurt, V.G., Zenchenko, V.M. **79**, L24

A Search for Low Energy Gamma Rays from CG 195 + 4

Haymes, R.C., Meegan, C.A., Fischman, G.J. **79**, 88

Gas, Dust, High Energy Particles and Star Formation in the Galactic Center

Audouze, J., Lequeux, J., Masnou, J.-L., Puget, J.-L. **80**, 276

Pulsed High Energy Gamma Rays from Vela Pulsar

Bhat, P.N., Gupta, S.K., Ramana Murthy, P.V., Sreekantan, B.V., Tonwar, S.C., Viswanath, P.R. **81**, L3

Diffuse Gamma Rays and Galactic Hydrogen Distribution

Özel, M.E. **81**, 33

The Number-intensity Relation for Galactic γ -ray Sources and the Emission from the Galactic Disk

Rothenflug, R., Caraveo, P. **81**, 218

Observational Consequences of Positron Production by Evaporating Black Holes

Okeke, P.N., Rees, M.J. **81**, 263

On the Nature of the COS-B Gamma-ray Source CG 353 + 16

Bignami, G.F., Morfill, G.E. **87**, 85

Compton Scattering Model for the γ -Ray Emission of NGC 4151

Pinkau, K. **87**, 192

Intensity and Spectrum of the Continuum Gamma Ray Emission from Supernovae

Cavallo, G., Pacini, F. **88**, 367

2S 1417-624: A Variable Galactic X-ray Source Near CG 312-1

Apparao, K.M.V., Naranan, S., Kelley, R.L., Bradt, H.V. **89**, 249

- The Penrose Photoproduction Scenario for NGC4151; (PCS-SSC). A Black Hole γ -ray Emission Mechanism for Active Galactic Nuclei and Seyfert Galaxies
Leiter, D. **89**, 370
- Detailed Characteristics of the High-energy Gamma Radiation from PSR 0833-45 Measured by COS-B
Kanbach, G., Bennett, K., Bignami, G.F., Buccheri, R., Caraveo, P., D'Amico, N., Hermsen, W., Lichti, G.G., Masnou, J.L., Mayer-Hasselwander, H.H. **90**, 163
- Cos B Observation of High Energy Gamma Ray Emission from the Orion Cloud Complex
Caraveo, P.A., Bennett, K., Bignami, G.F., Hermsen, W., Kanbach, G., Lebrun, F., Masnou, J.L., Mayer-Hasselwander, H.A., Paul, J.A., Sacco, B. **91**, L3
- The Diffuse Gamma-ray Background in the Hoyle-Narlikar Cosmology
Canuto, V.M., Owen, J.R., Narlikar, J.V. **92**, 26
- Galactic X-ray and Gamma-ray Emission and the Nature of the Interstellar Electron Spectrum
Protheroe, R.J., Wolfendale, A.W. **92**, 175
- 3C 273 Revisited: Confirmation by COS-B of High Energy Gamma-ray Emission
Bignami, G.F., Bennett, K., Buccheri, R., Caraveo, P.A., Hermsen, W., Kanbach, G., Lichti, G.G., Masnou, J.L., Mayer-Hasselwander, H.A., Paul, J.A. **93**, 71
- On the Nature of the Gamma Ray Emission from CG 195+4
Schlickeiser, R. **94**, 57
- Search for γ -radiation from Extragalactic Objects Using a Likelihood Method
Pollock, A.M.T., Bignami, G.F., Hermsen, W., Kanbach, G., Lichti, G.G., Masnou, J.L., Swanenburg, B.N., Wills, R.D. **94**, 116
- Detection of the Positron Annihilation Gamma Ray Line from the Galactic Center Region
Albernhe, F., Leborgne, J.F., Vedrenne, G., Boclet, D., Durouchoux, P., da Costa, J.M. **94**, 214
- High-energy Inverse Compton Gamma Rays from Cyg X-3 and Cir X-1?
Schlickeiser, R. **94**, 229
- Expected Characteristics of Pulsar Gamma-ray Radiation and the Problem of its Location
Heyvaerts, J., Signore, M. **96**, 36
- Neutrino Dating of the Galaxy Formation Epoch
Berezinsky, V.S., Ozernoy, L.M. **98**, 50
- A Deep Optical Search of the 1979 April 6 Gamma-ray Burst Error Box
Chevalier, C., Ilovaisky, S.A., Motch, C., Barat, C., Hurley, K., Niel, M., Vedrenne, G., Laros, J.G., Doyle Evans, W., Fenimore, E.E., Klebesadel, R.W., Estulin, I.V., Zenchenko, V.M. **100**, L1
- Angular Sizes of Gamma-ray Sources
Li Ti Pei, Wolfendale, A.W. **100**, L26
- Physical Conditions in an Optically Thin Relativistic Gas Irradiated by γ -rays
Kovner, I., Milgrom, M. **100**, 271
- A 928 MHz Search for Periodicities in 2CG195+04
Seiradakis, J.H. **101**, 158
- Erratum: Intensity and Spectrum of the Continuum Gamma Ray Emission from Supernovae
Cavallo, C., Pacini, F. **101**, 159
- Contribution of Cosmic Ray-irradiated Molecular Clouds to the Number of Apparent γ -ray Sources
Li Ti Pei, Wolfendale, A.W. **103**, 19
- Erratum: A Deep Optical Search of the 1979 April 6 Gamma-ray Burst Error Box
Chevalier, C., Ilovaisky, S.A., Motch, C., Barat, C., Hurley, K., Niel, M., Vedrenne, G., Laros, J.G., Doyle Evans, W., Fenimore, E.E., Klebesadel, R.W., Estulin, I.V., Zenchenko, V.M. **103**, 428
- Correlation Between X-ray and High Energy Gamma-ray Emission from Cygnus X-3
Weekes, T.C., Danaher, S., Fegan, D.J., Porter, N.A. **104**, L4
- X- and γ -ray Superfast Photometry
Bonazzola, S., Chevreton, M. **105**, 1
- Large-scale Distribution of Galactic Gamma Radiation Observed by COS-B
Mayer-Hasselwander, H.A., Bennett, K., Bignami, G.F., Buccheri, R., Caraveo, P.A., Hermsen, W., Kanbach, G., Lebrun, F., Lichti, G.G., Masnou, J.L. **105**, 164
- High Energy Gamma Rays from Cosmic Ray Nucleons
Schlickeiser, R. **106**, L5
- Infrared Scans of Gamma Ray Burst Source Regions
Apparao, K.M.V., Allen, D.A. **107**, L5
- High Energy γ -rays from a Relativistic Plasma
Giovannelli, F., Karakula, S., Tkaczyk, W. **107**, 376
- Compact Gamma Ray Point Sources: Are Gamma Ray Sources Optically Thick at Lower Frequencies?
Schlickeiser, R. **107**, 378
- COS-B Gamma-ray Measurements, Cosmic Rays and the Local Interstellar Medium
Lebrun, F., Bignami, G.F., Buccheri, R., Caraveo, P.A., Hermsen, W., Kanbach, G., Mayer-Hasselwander, H.A., Paul, J.A., Strong, A.W., Wills, R.D. **107**, 390
- The Log N-log S Curve of Gamma-ray Bursts Detected by the SIGNE Experiments
Barat, C., Chambon, G., Hurley, K., Niel, M., Vedrenne, G. **109**, L9
- Extragalactic Gamma Radiation: Use of Galaxy Counts as a Galactic Tracer
Thompson, D.J., Fichtel, C.E. **109**, 352
- Properties and Performance of the MPI Balloon Borne Compton Telescope
Schönfelder, V., Graser, U., Diehl, R. **110**, 138
- Hydrogen-Helium Flashes on Accreting Neutron Stars as a Possible Origin of Gamma-ray Bursts
Hameury, J.M., Bonazzola, S., Heyvaerts, J., Ventura, J. **111**, 242
- Radio Measurements in the Fields of Gamma-ray Sources. I. CG 195+04
Sieber, W., Schlickeiser, R. **113**, 314
- The Local Interstellar Medium as Traced by Gamma Rays
Strong, A.W., Bignami, G.F., Bloemen, J.B.G.M., Buccheri, R., Caraveo, P.A., Hermsen, W., Kanbach, G., Lebrun, F., Mayer-Hasselwander, H.A., Paul, J.A. **115**, 404
- Discrete Sources of Cosmic Gamma Rays
Li, T.P., Wolfendale, A.W. **116**, 95
- High Frequency Radio Continuum Observations of Bright Spiral Galaxies
Gioia, I.M., Gregorini, L., Klein, U. **116**, 164
- A low energy gamma ray observation of the region containing CG 195+4
Baker, R.E., Butler, R.C., Dean, A.J., Hayles, R.I., Ramsden, D., Di Cocco, G., Boella, G., Della Ventura, A., Perotti, F., Villa, G. **117**, 38
- Supplementary information for some γ -ray bursts by SAS-2 anticoincidence dome data
Özel, M.E., Kiziloğlu, Ü., Tokdemir, F. **118**, 114

The diffuse gamma radiation of the local spiral arm (Text in German)

Schlosser, W., Feitzinger, J.V. **119**, 42

Gamma-ray imaging with a rotating modulator

Durouchoux, P., Hudson, H., Hurford, G., Hurley, K., Mat-teson, J., Orsal, E. **120**, 150

The Cygnus X region. XIII. The dark cloud between IC 1318b and c

Wendker, H.J., Schramm, K.J., Dieckvoss, C. **121**, 69

A search for very high energy gamma-ray transients from Cygnus X-3 and PSR 0531

Weekes, T.C. **121**, 232

Gravitational settling in layers accreted on neutron stars and its relations to gamma ray bursts

Hameury, J.M., Heyvaerts, J., Bonazzola, S. **121**, 259

An interpretation of the low energy γ -ray emission from Seyfert nuclei in terms of annihilation radiation from a hot plasma

Bassani, L., Dean, A.J. **122**, 83

The energy spectrum of cosmic fireballs

Horstman, H.M., Cavallo, G. **122**, 119

A method to improve the visibility of time-variable gamma-ray sources in structured background

Özel, M.E., Mayer-Haefelwander, H.A. **125**, 130

Phase transitions in dense stars

Diaz Alonso, J. **125**, 287

Ultra high energy gamma rays from Cygnus X3

Dowthwaite, J.C., Gibson, A.I., Harrison, A.B., Kirkman, I.W., Lotts, A.P., Macrae, J.H., Orford, K.J., Turver, K.E., Walms-ley, M. **126**, 1

Galactic gamma radiation: the contribution from discrete sources

Houston, B.P., Wolfendale, A.W. **126**, 22

Fine time structure in the 1979 March 5 gamma ray burst

Barat, C., Hayles, R.I., Hurley, K., Niel, M., Vedrenne, G., De-sai, U., Estulin, I.V., Kurt, V.G., Zenchenko, V.M. **126**, 400

Searches for gamma ray emission from radio pulsars

Thompson, D.J., Bertsch, D.L., Hartman, R.C., Hunter, S.D. **127**, 220

Corequake and shock heating model of the 5 March 1979 gamma ray burst

Ellison, D.C., Kazanas, D. **128**, 102

Search for pulsed γ -ray emission from radio pulsars in the COS-B data

Buccheri, R., Bennett, K., Bignami, G.F., Bloemen, J.B.G.M., Boriakoff, V., Caraveo, P.A., Hermsen, W., Kanbach, G., Man-chester, R.N., Masnou, J.L., Mayer-Hasselwanger, H.A., Özel, M.E., Paul, J.A., Sacco, B., Scarsi, L., Strong, A.W. **128**, 245

Magnetohydrostatics in the polar caps of the γ ray burst sources

Hameury, J.M., Bonazzola, S., Heyvaerts, J., Lasota, J.P. **128**, 369

Gas Dynamics, see also Alfvén Waves, Convection, Hydrodynam-ics, Plasma Physics

The Gas Dynamics of H II Regions. I. The Champagne Model

Tenorio-Tagle, G. **71**, 59

The Structure of Gould's Belt

Strauss, F.M., Poeppel, W.G.L., Vieira, E.R. **71**, 319

The Velocity Dispersion in Giant Extragalactic H II Regions

Dyson, J.E. **73**, 132

Spiral Modes in Gaseous Cylindrical Systems

Robe, H. **75**, 14

Gas Dynamical Calculations on Extragalactic Double Radio Sources

Nepveu, M. **75**, 149

Two Component Emden Sphere

Capelato, H.V., Gerbal, D., Salvador Sole, E., Mathez, G., Mazure, A., Roland, J. **78**, 252; **38**, 295

Magneto Gasdynamics of Double Radio Sources

Nepveu, M. **79**, 40

The Gas Dynamics of H II Regions. III. The Components of the Galactic Extended Low Density H II Region

Tenorio-Tagle, G., Yorke, H.W., Bodenheimer, P. **80**, 110

Stationary Solutions and Their Stability in the Magnetic-binary Problem when the Primaries are Oblate Spheroids

Mavraganis, A. **80**, 130

On the Multiple Explosion Picture of Extended Radio Galaxies

Nepveu, M. **81**, 78

Collisions Between Grains in a Turbulent Gas

Völk, H.J., Jones, F.C., Morfill, G.E., Röser, S. **85**, 316

Enhanced Interaction of the Solar Wind and the Interstellar Neu-tral Gas by Virtue of a Critical Velocity Effect

Petelski, E.F., Fahr, H.J., Ripken, H.W., Brenning, N., Axnäs, I. **87**, 20

The Dynamics of the Spiral Galaxy M 81. I. Axisymmetric Models and the Stellar Density Wave

Visser, H.C.D. **88**, 149

The Dynamics of the Spiral Galaxy M 81. II. Gas Dynamics and Neutral hydrogen Observations

Visser, H.C.D. **88**, 159

Self Similar Evolution of Evaporative Supernova Remnants

Chièze, J.P., Lazareff, B. **95**, 194

On Dynamic Gas Ablation from Spherical Galaxies

Nepveu, M. **98**, 65

The Gasdynamics of H II Regions. IV. The Champagne Phase and the Propagation of Ionization Fronts into Dense Clouds

Bedijn, P.J., Tenorio-Tagle, G. **98**, 85

The Gasdynamics of H II Regions. V. The Interaction of Weak R Ionization Fronts with Dense Clouds

Tenorio-Tagle, G., Bedijn, P.J. **99**, 305

The Gas Dynamics of H II Regions. VI. H II Regions in Collapsing Massive Molecular Clouds

Yorke, H.W., Bodenheimer, P., Tenorio-Tagle, G. **108**, 25

A class of self-similar astrophysical explosions

Nepveu, M. **125**, 375

Gegenschein, see Zodiacal Light

General Relativity, see Cosmology, Relativistic Astrophysic

Relativistic Perturbations of Planetary Orbits in the Generalized Three-parametric Schwarzschild Metric. The Case of Mercury

Lestrade, J.-F. **100**, 143

Scale-invariant Gravity: a Simple Formulation

Wesson, P.S. **102**, 45

On Some Possible Relativistic Effects in SS 433

Ruffini, R., Doo Jong Song, Stella, L. **103**, L7

Cepstral Analysis of Interfering Delay Signals as Applied to De-tection of Gravitational Lenses

Afraimovich, E.L. **105**, L5

Relativistic Perturbations for All the Planets

Lestrade, J.-F., Bretagnon, P. **105**, 42

Possible Measurement of the Time Delay Between Gravitational Images of Expanding Double Radio-sources

Vanderriest, C. **106**, L1

Photometry of 0957+561; Detection of Short Period Variations (in French)

Vanderriest, C., Bijaoui, A., Félenbok, P., Lelièvre, G., Schneider, J., Wlérick, G. **110**, L11

Gravitational Radiation from Collapsing Rotating Stellar Cores

Müller, E. **114**, 53The Precision on the Measure of q_0 Using the Gravitational Lensing EffectLacroix, G., Schneider, J. **115**, 54

A Photometric Study of the Eclipsing Binary V 889 Aql: An Example of Relativistic Apsidal Motion

Giménez, A., Scaltriti, F. **115**, 321

Relativistic Perturbations of the Moon in ELP 2000

Lestrade, J.F., Chapront-Touze, M. **116**, 75Erratum: The precision on the measure of q_0 using the gravitational lensing effectLacroix, G., Schneider, J. **118**, 368

A new approach to scale-invariant gravity (Or: A variable-mass embedding for general relativity)

Wesson, P.S. **119**, 145

Gravitational lens effects of neutrino astronomical objects

Chongming, X., Xuejun, W. **120**, 15

The evolution of shear and gravitational wave perturbations of Friedmann models and the isotropy of the Universe

Sanz, J.L. **120**, 109

Interaction of a rotating charged black-hole with a uniform magnetic field

Denardo, G., Treves, A., Vergani, F. **123**, 355

Giants, see also Late Type Stars, Supergiants

The Colours of G and K Type Giant Stars. I

Gustafsson, B., Bell, R.A. **74**, 313

Detailed Analysis of High Velocity Stars

Foy, R. **85**, 287

The Relationship between the Envelope Composition of a 6 M Red-giant Model and its Future Evolution

Priainik, D., Shaviv, G. **88**, 127

CH Subgiants and the Mixing Hypothesis

Smith, J.A., Demarque, P. **92**, 163

Detailed Analysis of Cool Giants with Low Microturbulent Velocity

Foy, R. **93**, 315

On Some Extreme Metal-deficient Giants

Bartkevičius, A., Straizys, V. **104**, 215

Differential Rotation, Magnetic Activity and X-ray Emission of Late Type Giants

Belvedere, G., Chiuderi, C., Paternò, L. **105**, 133

The Absolute Magnitudes of G 5-M 3 Stars near the Giant Branch

Egret, D., Keenan, P.C., Heck, A. **106**, 115

Spectra of the Red (2,0) CN Band in 31 G and K Giant Stars

Kjaergaard, P., Walker, G.A.H., Yang, S. **106**, 180; **46**, 375

Onset of Rapid Mass Loss in Cool Giant Stars: Magnetic Field Effects

Mullan, D.J. **108**, 279

Polarimetric Observations of HD 199178 - an FK Comae Type Star

Pirola, V., Vilhu, O. **110**, 351

Evolution of Low Mass Zero Metal Giants up to the Helium Flash

D'Antona, F., Mazzitelli, I. **115**, L1

Carbon, Nitrogen and Oxygen Abundances in G 8-K 3 Giant Stars

Kjaergaard, P., Gustafsson, B., Walker, G.A.H., Hultqvist, L. **115**, 145

Erratum: Evolution of Low Mass Zero Metal Stars up to the Helium Flash

D'Antona, F., Mazzitelli, I. **120**, 164

On the evolution to red giants

Weiss, A. **127**, 411

Globular Clusters, see Clusters, globular

Globules

On the Evolution of Barnard Globules

Ott, H.-A., Sanders, W.L. **85**, 365

Star formation in Bok globules and low-mass clouds. I. The cometary globules in the Gum Nebula

Reipurth, B. **117**, 183

The physical structure of the globule B 335

Krügel, E., Stenholm, L.G., Steppe, H., Sherwood, W.A. **127**, 195

Gould's Belt

The Structure of Gould's Belt

Strauss, F.M., Poeppel, W.G.L., Vieira, E.R. **71**, 319

Anomalous Extinction and Gould's Belt

Whittet, D.C.B. **72**, 370

A Contribution to the Kinematics of the Gould Belt

Tsioumis, A., Fricke, W. **75**, 1Kinematics of Interstellar H I in the Region $320^\circ \leq l \leq 341^\circ$, $+7^\circ \leq b \leq +26^\circ$ Olano, C.A., Pöppel, W.G.L. **94**, 151

Neutral-hydrogen Emission Features in Scorpius and Ophiuchus and the Origin of SCO OB 2

Olano, C.A., Pöppel, W.G.L. **95**, 316

On a Model of Local Gas Related to Gould's Belt

Olano, C.A. **112**, 195

Grains, see also Dust

Evaporation and Growth of Circumstellar Grains

Lefèvre, J. **72**, 61

Chemical and Thermal Equilibrium in Dark Clouds. II. Importance of Grain Surface Reactions for Molecular Formation

Viala, Y.P., Bel, N., Clavel, J. **73**, 174

On the Middle Infra-red Fluorescence and Absorption of Molecules in Grain Mantles

Allamandola, L.J., Greenberg, J.M., Norman, C.A. **77**, 66

Infra-red Molecular Line Emission from Grain Surfaces in Dense Clouds

Allamandola, L.J., Norman, C.A. **77**, 261The 3.1 μm Absorption in Molecular Clouds is Probably Due to Amorphous H₂O IceLéger, A., Klein, J., de Cheveigne, S., Guinet, C., Defourneau, D., Belin, M. **79**, 256Interstellar Molecules: Hydrocarbon Formation on Graphite Grains at $T \geq 7\text{ K}$ Bar-Nun, A., Litman, M., Rappaport, M.L. **85**, 197

Collisions Between Grains in a Turbulent Gas

Völk, H.J., Jones, F.C., Morfill, G.E., Röser, S. **85**, 316

Infra-red Absorption Lines by Molecules in Grain Mantles

Hagen, W., Allamandola, L.J., Greenberg, J.M. **86**, L1

On the Photoelectric Yield of Insulating Dust Grains

Gail, H.-P., Sedlmayr, E. **86**, 380

A Unified Model of Interstellar Grains: A Connection between Alignment Efficiency, Grain Model Size, and Cosmic Abundance

Hong, S.S., Greenberg, J.M. **88**, 194

Infrared Emission by Dust Grains near Variable Primary Sources. II. A Model for Infrared Novae

Bode, M.F., Evans, A. **89**, 158

- On the Motion and Destruction of Grains in Interstellar Clouds
Havnes, O. **90**, 106
- On the Electrostatic Potential of Interplanetary Grains: Influence of the Thermoionic Effect
Millet, J., Lafon, J.P.L., Lamy, Ph.L. **92**, 6
- The Wavelength Dependence of Linear Polarization in T Tauri Stars
Bastien, P. **94**, 294
- On the Electrostatic Potential and Charge of Cosmic Grains. I. Theoretical Background and Preliminary Results
Lafon, J.-P.J., Lamy, Ph.L., Millet, J. **95**, 295
- Erosion Yields of 4 K N₂ Frozen Gas by MeV Helium Ions
Pirronello, V., Strazzulla, G., Foti, G., Rimini, E. **96**, 267
- Formation of Planetesimals in an Evolving Protoplanetary Disk
Coradini, A., Federico, C., Magni, G. **98**, 173
- On the Charge Distribution of Interplanetary Grains
Mukai, T. **99**, 1
- On the Ice Content of the KL Nebula in Orion
Papoular, R. **104**, L1
- "Flip-flop" of Electric Potential of Dust Grains in Space
Meyer-Vernet, N. **105**, 98
- Far IR Emission of the Galactic Plane at High Longitudes
Bussoletti, E., Guidi, I., Melchiorri, F., Natale, V. **105**, 184
- Interstellar Grain Explosions: Molecule Cycling Between Gas and Dust
d'Hendecourt, L.B., Allamandola, L.J., Baas, F., Greenberg, J.M. **109**, L12
- Model Calculations of the Molecular Composition of Interstellar Grain Mantles
Tielens, A.G.G.M., Hagen, W. **114**, 245
- Near Infrared Spectroscopy of W 51 IRS-2
White, G.J., Phillips, J.P., Williams, P.M., Watt, G.D., Richardson, K.J. **116**, 293
- Surface chemistry of deuterated molecules
Tielens, A.G.G.M. **119**, 177
- Magnetic alignment of interstellar dust grains for dominating magnetic effects
Cugnon, P. **120**, 156
- Electrodynamics of submicron dust in the cometary coma
Wallis, M.K., Hassan, M.H.A. **121**, 10
- Excitation of violent discharge of charged bodies
Lafon, J.-P.J., Millet, J.M. **123**, 73
- Does CO condense on dust in molecular clouds?
Léger, A. **123**, 271
- Charged particle erosion of frozen volatiles in ice grains and comets
Johnson, R.E., Lanzerotti, L.J., Brown, W.L., Augustyniak, W.M., Mussil, C. **123**, 343
- A comparison of UV extinction in Sco OB2 and Per OB1 associations
Krelowski, J., Strobel, A. **127**, 271
- Granulation**, see Solar Granulation
- Granular-size Horizontal Velocities in the Solar Atmosphere
Mattig, W., Mehlretter, J.P., Nesis, A. **96**, 96
- Gravitation, Gravitational Radiation**
- The Influence of the Age of the Universe on the Stellar Evolution with Variable G
Vaiopoulos, D.A., Laskarides, P.G. **71**, L12
- Gravitational Redshift According to the Bi-metric Theory of Gravitation
Falik, D., Opher, R. **71**, 332
- Formation of Neutron Star Binaries and Their Importance for Gravitational Radiation
Clark, J.P.A., van den Heuvel, E.P.J., Sutantyo, W. **72**, 120
- On the Gravitational Energy of Ellipsoidal Bodies and Some Related Functions
Neutsch, W. **72**, 339
- White Dwarf Luminosity in a Scale Covariant Theory of Gravity
Lodenquai, J. **76**, 212
- Z Cha - New Evidence for Gravitational Waves?
Ritter, H. **86**, 204
- Scale Covariant Gravitation: Virial Masses of Groups of Galaxies
Klinkhamer, F.R. **87**, 354
- Cosmological Gravitational Waves: Their Origin and Consequences
Carr, B.J. **89**, 6
- Electrodynamics in Scale-Covariant Gravity Theory
Mansfield, V.N., Malin, S. **89**, 70
- Cyg X-1: A Massive Neutron Star?
Goldman, I. **97**, 219
- Time-varying Newtonian Gravity. An Upper Limit for the Rate of Change of the Gravitational Constant
Lapedra, R., Palacios, J.A. **98**, 382
- Cavities in High Density Universes
Ochionero, F., Vecchia-Scavalli, L., Vittorio, N. **99**, L12
- Gravitational Energy Release Induced by the Nuclear Energy Generation Processes: The Resolution of the Solar Neutrino Dilemma
Rouse, C.A. **102**, 8
- Scale-invariant Gravity: a Simple Formulation
Wesson, P.S. **102**, 45
- Possible Measurement of the Time Delay Between Gravitational Images of Expanding Double Radio-sources
Vanderriest, C. **106**, L1
- Evolutionary Luminosity Functions of Extragalactic Sources Driven by Gravitational Power
Cavaliere, A., Giallongo, E., Messina, A., Vagnetti, F. **114**, L1
- Gravitational Radiation from Collapsing Rotating Stellar Cores
Müller, E. **114**, 53
- Can all quasars be gravitationally lensed Seyfert's nuclei?
Setti, G., Zamorani, G. **118**, L1
- A new approach to scale-invariant gravity (Or: A variable-mass embedding for general relativity)
Wesson, P.S. **119**, 145
- Stability of a 1 M_{\odot} star with decreasing gravitational constant
Boury, A., Scuflaire, R., Noels, A., Gabriel, M. **119**, 253
- Gravitational lens effects of neutrino astronomical objects
Chongming, X., Xuejun, W. **120**, 15
- Gravitational lenses with angular momentum
Ibáñez, J. **124**, 175
- The difference in light travel time between gravitational lens images. II. Theoretical foundations
Borgeest, U. **128**, 162
- Groups of Galaxies**, see Clusters of Galaxies
- Galaxy groups: correlations between luminosities, velocity dispersions and virial radii
Mezzetti, M., Giuricin, G., Malagnini, M.L., Mardirossian, F. **125**, 368
- Poor evidence of merging in loose galaxy groups
Mardirossian, F., Giuricin, G., Mezzetti, M. **126**, 86

Gyrosynchrotron Emission, Gyroresonance

Gyro-synchrotron Modulation in the Moving Type IV Bursts

Trottet, G., Pick, M., Heyvaerts, J. **79**, 164

Microwave, EUV, and X-ray Observations of Active Region Loops: Evidence for Gyroresonance Absorption in the Corona

Kundu, M.R., Schmahl, E.J., Gerassimenko, M. **82**, 265

Erratum: Microwave, EUV, and X-ray Observations of Active Region Loops: Evidence for Gyroresonance Absorption in the Corona

Kundu, M.R., Schmahl, E.J., Gerassimenko, M. **91**, 377

H I Regions, see Interstellar Clouds, Radio Frequency Lines: 21 cm Line

H II Regions, see also Interstellar Matter, Nebulae, Orion Nebula, Supernovae and Supernova Remnants

The Gas Dynamics of H II Regions. I. The Champagne Model

Tenorio-Tagle, G. **71**, 59

Interaction of Hot Stars and the Interstellar Medium. IX. Morphology, Excitation, and Kinematics of SH 2-158 (NGC 7538), a Bright High Excitation Galactic Nebula

Deharveng, L., Lortet, M.C., Testor, G. **71**, 151

Continuum Observations of the H II Regions W 51 A, W 3 (Main), W 49 A and DR 21 at 3.9 mm

Malkamäki, L., Sandell, G., Mattila, K., Gebler, K.-H. **71**, 198

The Electron Temperatures of H II Regions Determined from Radio Recombination Line Observations at 22 GHz

Wilson, T.L., Bieging, J., Wilson, W.E. **71**, 205

Double-Charge Transfer Processes in Gaseous Nebulae

Tarter, C.B., Weisheit, J.C., Dalgarno, A. **71**, 366

10 Micron Observation of H II Regions with the ESO 3.6 Meter Telescope

Epchtein, N., Turon, P. **72**, L4

Aperture Synthesis Observations of M 17 at 5 GHz

Matthews, H.E., Harten, R.H., Goss, W.M. **72**, 224

The Velocity Dispersion in Giant Extragalactic H II Regions

Dyson, J.E. **73**, 132

Interstellar CH: Excitation Temperatures and Abundance Relative to H₂CO

Genzel, R., Downes, D., Pauls, T., Wilson, T.L., Bieging, J. **73**, 253

OH Main Line Masers. II. H II/OH Regions

Elitzur, M. **73**, 322

Excitation and Nature of the Bipolar Nebula S 106

Eiroa, C., Elsässer, H., Lahulla, J.F. **74**, 89

Near Infrared Observations of NGC 2024

Frey, A., Lemke, D., Thum, C., Fahrback, U. **74**, 133

Infrared Photometry and Spectrophotometry of G 75.84+0.4

Pipher, J.L., Soifer, B.T., Krassner, J. **74**, 302

Infrared Emission of Dusty H II Regions

Tielens, A.G.G.M., Jong, T. **75**, 326

The Structure of W 51

Pankonin, V., Payne, H.E., Terzian, Y. **75**, 365

A Comparison of High Resolution Radio and Far-infrared Maps of M 17

Wilson, T.L., Fazio, G.G., Jaffe, D., Kleinmann, D., Wright, E.L., Low, F.J. **76**, 86

Line Intensity Data Compilation for a Sample of H II Regions

Alloin, D., Collin-Souffrin, S., Joly, M. **76**, 257; **37**, 361

Electron Temperature Gradients with Distance from the Galactic Center?

Wilson, T.L., Pauls, T.A., Ziurys, L.M. **77**, L3

Dynamical Evolution of a Dusty H II Region

Gail, H.-P., Sedlmayr, E. **77**, 165

Optical, Radio, and Infrared Observations of Compact H II Regions. III. The Nebula S 235 A

Krassner, J., Pipher, J.L., Sharpless, S. **77**, 302

Pressure Broadening of Radio Recombination Lines from Multiple-component H II Regions

Shaver, P.A. **78**, 116

Nitrogen and Oxygen Abundances in Galaxies

Alloin, D., Collin-Souffrin, S., Joly, M., Vigroux, L. **78**, 200

Star Formation through an Accretion Shock: A Model for H⁺ Blisters

Icke, V. **78**, 352

Visual Extinction (A_v) in the Direction of the North America Dust Cloud

Goudis, C., White, N.J. **78**, 373

Temperature and Density Variations in Gaseous Nebulae. The Case of the GUM Nebula

Vidal, J.-L. **79**, 93

Velocity Dispersions in H II Regions as Distance Indicators

de Vaucouleurs, G. **79**, 274

Radio Determination of Oxygen Abundance Variation in the Galaxy

Mezger, P.G., Pankonin, V., Schmid-Burgk, J., Thum, C., Wink, J. **80**, L3

The Gas Dynamics of H II Regions. III. The Components of the Galactic Extended Low Density H II Region

Tenorio Tagle, G., Yorke, H.W., Bodenheimer, P. **80**, 110

Physical Analysis of the Giant H II Regions IC 1805 and IC 1848

Vallée, J.P., Hughes, V.A., Viner, M.R. **80**, 186

On Heating by Ion Streams in H II/OH Regions

Elitzur, M. **81**, 354

A Catalogue of Emission Regions in M 33

Sabbadin, F., Rafanelli, P., Bianchini, A. **81**, 389; **39**, 97

Heavy Obscuration in the Direction of W 3/W 4/W 5

Goudis, C., White, N.J. **83**, 79

An Exploratory Investigation of the Near Nuclear H II Regions in NGC 3310

Heckman, T.M., Balick, B. **83**, 100

A Formaldehyde Maser in NGC 7538

Forster, J.R., Goss, W.M., Wilson, T.L., Downes, D., Dickel, H.R. **84**, L1

The Object R 136 in the Gas Nebula 30 Doradus: Structure, Colour, Mass and Excitation Parameter

Feitzinger, J.V., Schlosser, W., Schmidt-Kaler, Th., Winkler, Chr. **84**, 50

Interaction of Hot Stars and the Interstellar Matter. X. Morphology, Excitation, and Structure of the Bright Galactic Nebula Sh2-156 (IC 1470)

Heydari-Malayeri, M., Testor, G., Lortet, M.C. **84**, 154

Observations of the J=2→1 Transitions of ¹²C¹⁸O and ¹²C¹⁶O Towards Galactic H II Regions

White, G.J., Watt, G.D., Beckman, J.E., Rose, W.B., van Vliet, A.H.F. **84**, 212

Some Comments on the Analysis of Extragalactic H II Regions Spectra

Stasińska, G. **84**, 320

IUE UV Spectra of Giant Extragalactic H II Regions

Rosa, M. **85**, L21

Charge Transfer of C⁺ and S⁺ in Diffuse Nebulae

Butler, S.E., Dalgarno, A. **85**, 144

Density Fluctuations in H II-Regions, a Statistical Approach

Traving, G. **85**, 281

- The Interest of High Spatial Resolution Observations of Presumed Metal-rich H II Regions
Stasińska, G. **85**, 359
- Spatial Distribution of Fine Structure Line Radiation in W 3 IRS 1: Implications for Far UV Properties of Dust Opacity
Lacasse, M.G., Herter, T., Krassner, J., Helfer, H.L., Pipher, J.L. **86**, 231
- High-resolution [Ne II] Observations in G 333.6 -0.2
de Vries, J.S., van der Wal, P.B., Andriesse, C.D. **86**, 248
- On the Core-Halo Structure of NGC 604
Melnick, J. **86**, 304
- On the Photoelectric Yield of Insulating Dust Grains
Gail, H.-P., Sedlmayr, E. **86**, 380
- An Optical and Radio Survey of the Nuclei of Bright Galaxies. Stellar Populations and Normal H II Regions
Heckman, T.M. **87**, 142
- The Helium Abundance of Galactic H II Regions
Thum, C., Mezger, P.G., Pankonin, V. **87**, 269
- 8-13 μ m Spectrophotometry of S 106
Hefele, H., Hölzle, E. **88**, 145
- A Continuum Map of IC 1396 at 2695 MHz
Matthews, H.E., Haslam, C.G.T., Hills, D.L., Salter, C.J. **88**, 285
- The Evolved H II Region S 115
Harten, R., Felli, M. **89**, 140
- Aperture Synthesis Observations of Recombination Lines from Compact H II Regions. I. W 49 A and W 51 A
van Gorkom, J.H., Goss, W.M., Shaver, P.A., Schwarz, U.J., Harten, R.H. **89**, 150
- A Three-dimensional Model of IC 1396
Wendker, H.J., Baars, J.W.M. **89**, 180
- The Cygnus X Region. XII. On the Excitation and Distance of the Gamma Cygni H II Region
Appenzeller, I., Wendker, H.J. **89**, 239
- An H 167 α Line Map of the Extended H II Region S 252 (NGC 2175)
Donati Falchi, A., Felli, M., Tofani, G. **89**, 363
- Spectroscopic Observations of Galactic Nebulae and Galaxies with the Imaging Photon Counting System (IPCS)
Hua, C.T., Donas, J., Doan, N.H. **90**, 8
- Why is Observable Radio Recombination Line Emission from Galactic H II Regions Always Close to LTE?
Shaver, P.A. **90**, 34
- H II Bubbles and Disruption of Molecular Clouds
Mazurek, T.J. **90**, 65
- An Anonymous Ring Nebula around a WC 6 Star in Carina
Lortet, M.C., Niemela, V.S., Tarsia, R. **90**, 210
- Radio Observations of H II Regions in External Galaxies. III. Thermal Emission, H II Regions and Star Formation in 14 Late-type Galaxies
Israel, F.P. **90**, 246
- Infrared Spectroscopy with a Balloon Borne Michelson Interferometer. II. Observation of O III, O I, and N III Fine Structure Lines in H II Regions
Moorwood, A.F.M., Salinari, P., Furniss, I., Jennings, R.E., King, K.J. **90**, 304
- Multicolour *UBVRI* Photometry of Stars in M 17
Chini, R., Elsässer, H., Neckel, Th. **91**, 186
- The Area Around the Orion Nebula Observed in the CO ($J=1-0$) Transition
Gillespie, A.R., White, G.J. **91**, 257
- H I Observations and Star Formation in the Blue Compact Galaxy I Zw 18
Lequeux, J., Viallefond, F. **91**, 269
- Accurate Electron Temperatures from Radio Recombination Lines
Shaver, P.A. **91**, 279
- The "Helium Problem" in the Source DR 21
Pitault, A. **91**, 374
- Discovery of the Exciting Star in the North America-Pelican Nebula Complex?
Neckel, Th., Harris, A.W., Eiroa, C. **92**, L9
- Ionization Front Structure Dependence on Boundary Conditions
Mason, D.J. **92**, 117
- A 2.3 GHz Radio Continuum Map of the Upper Scorpio Region
Baart, E.E., de Jager, G., Mountfort, P.I. **92**, 156
- Spectroscopic Observations of H II Regions in NGC 5128. I. Radial Velocities
Möllenhoff, C. **93**, 248
- Abundance Determinations in H II Regions: A Critical Analysis of Two Empirical Methods
Stasińska, G., Alloin, D., Collin-Souffrin, S., Joly, M. **93**, 362
- Optical Spectrum of the Filamentary H II Region North of the Carina Complex
Hua, C.T., Llebaria, A. **94**, 12
- Photographic and Spectroscopic Observations of Planetary Nebulae
Sabbadin, F., Hamzaoglu, E. **94**, 25
- Radio Continuum Emission from the Cepheus OB3 Molecular Cloud-infrared Source
Harten, R.H., Thum, C., Felli, M. **94**, 231
- Atomic and Ionized Hydrogen Associated with NGC 281 (S 184)
Roger, R.S., Pedlar, A. **94**, 238
- Aperture Synthesis Observations of Recombination Lines from Compact H II Regions. II. The Radio Sources near K 3-50
van Gorkom, J.H., Shaver, P.A., Pottasch, S.R., Blair, G.N., Matthews, H.E. **94**, 259
- The Collision of Clouds with a Galactic Disk
Tenorio-Tagle, G. **94**, 338
- Far Infrared Observations of S 255 and S 187
Sargent, A.I., van Duinen, R.J., Nordh, H.L., Aalders, J.W.G. **94**, 377
- Partial Aperture Synthesis of Five Dark Clouds at 1.4 GHz
Falgarone, E., Gilmore, W. **95**, 32
- Morphology and Kinematics of the Ionized Gas in NGC 2997
Milliard, B., Marcelin, M. **95**, 59
- Polarization of Starlight in M 17
Schulz, A., Lenzen, R., Schmidt, Th., Proetel, K. **95**, 94
- Near Infrared Observations of the H II Region S 146
Eiroa, C., Neckel, Th., Sanchez Magro, C., Selby, M.J. **95**, 206
- New Galactic Sources in the BG Catalogue: Search at 1.4 GHz with the Westerbork Synthesis Radiotelescope
Fanti, C., Mantovani, F., Tomasi, P. **95**, 208; **43**, 1
- Sensitive Mainline OH Spectra of Three H II Regions
Cohen, N.L., Willson, R.F. **96**, 230
- Galactic Metal Abundance Gradient in Young Stellar Population
Panagia, N., Tosi, M. **96**, 306
- Pumping of H II/OH Masers by IR Line Overlaps
Guilloteau, S., Lucas, R., Omont, A. **97**, 347
- Fabry-Perot Radial Velocities of S 274: A Planetary Nebula
Recillas-Cruz, E., Pismis, P. **97**, 398
- The Gasdynamics of H II Regions. IV. The Champagne Phase and the Propagation of Ionization Fronts into Dense Clouds
Bedijn, P.J., Tenorio-Tagle, G. **98**, 85

- A Model for the Formaldehyde Maser near NGC 7538-IRS 1
Boland, W., de Jong, T. **98**, 145
- A Study of the S 15 A—Cep B Cloud and Its Relation to Cepheus OB 3 Association
Panagia, N., Thum, C. **98**, 295
- S 106: An H II-region Driven by a Stellar Wind?
Hippelein, H., Münch, G. **99**, 248
- A Near Infrared Map of M 17
Lemke, D., Harris, A.W. **99**, 285
- The Gasdynamics of H II Regions. V. The Interaction of Weak R Ionization Fronts with Dense Clouds
Tenorio-Tagle, G., Bedijn, P.J. **99**, 305
- Spectroscopic Observations of H II Regions in NGC 5128. II. Quantitative Spectroscopy
Möllenhoff, C. **99**, 341
- A High-resolution Search for Small-scale Structure in Sharpless H II Regions at 4.995 GHz. II. General Properties of the Entire Sample
Felli, M., Harten, R.H. **100**, 28
- A High-resolution Search for Small-scale Structure in Sharpless H II Regions at 4.995 GHz. III. Description of Selected Sources
Felli, M., Harten, R.H. **100**, 42
- Polarization of Starlight in W 3
Lenzen, R., Schulz, A., Schmidt, Th. **100**, 249
- Kinematics and Dynamics of M83 from H α Interferometry. I. Observations: The Velocity Field
Comte, G. **100**, 334; **44**, 441
- On the Association of the 1720 MHz OH Masers with the H₂CO Masers in NGC 7538 (IRS1)
Guilloteau, S., Lucas, R. **101**, L19
- Aperture Synthesis Observations of a Giant H II Region in Cygnus X
Baars, J.W.M., Wendker, H.J. **101**, 39
- Small-scale Structure of the Core of M33 (NGC 598)
Hua, C.T., Nguyen-Trong, T. **101**, 187
- Near Infrared High Resolution Spectrophotometry of Forbidden [C I] in the Orion Nebula
Cosmovici, C.B., Strafella, F., Iijima, T. **101**, 397
- UBV and H β Observations of Stars towards M 8
Chini, R., Neckel, Th. **102**, 171
- The Distance to G316.8-0.1
Shaver, P.A., Retallack, D.S., Wamsteker, W., Danks, A.C. **102**, 225
- Measurements of the Equivalent Width of the H β Emission Line and Age Determination of H II Regions of the LMC and SMC
Dottori, H.A., Bica, E.L.D. **102**, 245
- CO ($J=2\rightarrow 1$) Observations of Southern H II Regions
de Graauw, T., Lidholm, S., Fitton, B., Beckman, J., Israel, F.P., Nieuwenhuijzen, H., Vermue, J. **102**, 257
- The Interstellar Extinction Law in Some Dusty H II Regions
Neckel, Th., Chini, R. **102**, 281; **45**, 451
- Highly Excited OH in W 3 (OH)
Baudry, A., Walmsley, C.M., Winnberg, A., Wilson, T.L. **102**, 287
- Physics of the Peripheral Zones of H II Regions. I. Border Enhancements of [O III]/H β and He I/H β in H II Regions
Heydari-Malayeri, M. **102**, 316
- Synthesis Observations of the Radio Continuum Radiation of the H II Region NGC 7822 (W 1)
Harten, R.H., Goss, W.M., Matthews, H.E., Israel, F.P. **103**, 50
- Further Radio Observations of W 50: Total Intensity and Linear Polarization Measurements at 1.7 and 2.7 GHz
Downes, A.J.B., Pauls, T., Salter, C.J. **103**, 277
- Star Formation and Extinction in Extragalactic H II Regions
Lequeux, J., Maucherat-Joubert, M., Deharveng, J.M., Kunth, D. **103**, 305
- [O III]/H β Ratios of Emission Regions in the Arms and Disk of M 33 and Luminosity Functions at the Fronts of the Arms
Boulesteix, J., Dubout-Crillon, R., Monnet, G. **104**, 15
- Polarimetric Observations of S 106
Lacasse, M.G., Boyle, D., Leveault, R., Pipher, J.L., Sharpless, S. **104**, 57
- On the Distribution of Pulsars in the Galactic Plane
del Romero, A., Gómez-González, J. **104**, 83
- The Giant Spiral Galaxy M 101. VII. Associations of H I Concentrations and H II Complexes
Viallefond, F., Allen, R.J., Goss, W.M. **104**, 127
- Observations of NGC 604 over Six Decades in Frequency
Israel, F.P., Gatley, I., Matthews, K., Neugebauer, G. **105**, 229
- Optical Study of the W 51 Complex
Goudis, C., Hippelein, H. **105**, 329
- The Origin of the Diffuse Galactic Far Infrared and Sub-millimeter Emission
Mezger, P.G., Mathis, J.S., Panagia, N. **105**, 372
- Wolf-Rayet Stars in Extragalactic H II Regions: Discovery of a Peculiar WR in IC 1613/ 3
D'Odorico, S., Rosa, M. **105**, 410
- Photoelectric Heating of H II Regions
Maciel, W.J., Pottasch, S.R. **106**, 1
- NLTE Model Atmospheres for Early-type Stars of Various Chemical Compositions and Resulting Emission-line Spectra for Surrounding H II Regions
Borsenberger, J., Stasińska, G. **106**, 158
- An H I Absorption Determination of the Distance of W 31
Kalberla, P.M.K., Goss, W.M., Wilson, T.L. **106**, 167
- The Radio H II Regions Associated with Cep A
Hughes, V.A., Wouterloot, J.G.A. **106**, 171
- On the Distance to the Giant Galactic H II Region NGC 3603
Melnick, J., Grosbøl, P. **107**, 23
- H₂O Masers—Survey of the Galactic Plane. II
Braz, M.A., Scalise, E. Jr. **107**, 272
- The Gas Dynamics of H II Regions. VI. H II Regions in Collapsing Massive Molecular Clouds
Yorke, H.W., Bodenheimer, P., Tenorio-Tagle, G. **108**, 25
- Results of a Radio Survey for New Compact H II Regions
Wink, J.E., Altenhoff, W.J., Mezger, P.G. **108**, 227
- On the Infrared Sources 1 and 2 in NGC 7538
Elsässer, H., Birkle, K., Eiroa, C., Lenzen, R. **108**, 274
- Wolf-Rayet Stars in Extragalactic H II Regions. II. NGC 604—a Giant H II Region Dominated by Many Wolf-Rayet Stars
Rosa, M., D'Odorico, S. **108**, 339
- An H II Region Near NML Cygnus
Habing, H.J., Goss, W.M., Winnberg, A. **108**, 412
- Star Formation in the NH₃ Cloud of the NGC 2071 Region
Calamai, G., Felli, M., Giardinelli, S. **109**, 123
- A Continuum Study of Galactic Radio Sources in the Constellation of Monoceros
Graham, D.A., Haslam, C.G.T., Salter, C.J., Wilson, W.E. **109**, 145
- Radio, Infrared, and Optical Observations of Compact H II Regions. IV. The Nebula S235B
Krassner, J., Pipher, J.L., Sharpless, S., Herter, T. **109**, 223
- A Catalogue of Model H II Regions
Stasińska, G. **110**, 180; **48**, 299

- The Structure of Orion B (NGC 2024): A Recombination Line and Continuum Map
 Krügel, E., Thum, C., Martin-Pintado, J., Pankonin, V. **110**, 181; **48**, 345
- Dynamics of the Supergiant Shell LMC 2 in the Large Magellanic Cloud
 Caulet, A., Deharveng, L., Georgelin, Y.M., Georgelin, Y.P. **110**, 185
- [Ni II] Emission Under Nebular Conditions
 Nussbaumer, H., Storey, P.J. **110**, 295
- Excitation and Extinction in the LMC H II Region N159A and Discovery of a Highly Excited "Blob" in Its Vicinity
 Heydari-Malayeri, M., Testor, G. **111**, L11
- The Distribution of H II Regions in External Galaxies. I
 Considère, S., Athanassoula, E. **111**, 28
- Absolute Photometry of Supernova Remnants and Emission Nebulae in the Galaxy and the Magellanic Clouds
 Greve, A., van Genderen, A.M., Dennefeld, M., Danziger, I.J. **111**, 171
- Reddening Relations of the *VBLW* and *UBV* Systems for Objects with Emission Line Spectra
 Greve, A., van Genderen, A.M. **111**, 185
- An Unusual OH Maser Associated With V 645 Cygni
 Morris, M., Kazès, I. **111**, 239
- A Catalogue of Radio Sources within 30' of Cep A
 Hughes, V.A., Viner, M.R., Wouterloot, J.G.A. **111**, 358
- The Gas Dynamics Around OB Associations. I. Recombining H II Regions and the Formation of Expanding Neutral Shells
 Beltrametti, M., Tenorio-Tagle, G., Yorke, H.W. **112**, 1
- The Gas Dynamics Around OB Associations. II. Dependence on the Initial Ambient Density
 Tenorio-Tagle, G., Beltrametti, M., Bodenheimer, P., Yorke, H.W. **112**, 104
- Recent Star-forming Activity in the Clumpy Irregular Galaxy NGC 7673
 Duflot-Augarde, R., Alloin, D. **112**, 257
- Formaldehyde Absorption Measurements of Selected Galactic Molecular Clouds
 Bieging, J., Wilson, T.L., Downes, D. **112**, 394; **49**, 607
- Extended and Anisotropic High-velocity Gas Flows in the Orion-KL Region
 Olofsson, H., Elldér, J., Hjalmarson, Å., Rydbeck, G. **113**, L18
- The H II Region - Molecular Cloud Complex Sh 2-269: An Optical and Millimeter Wavelength Study
 Heydari-Malayeri, M., Testor, G., Baudry, A., Lafon, G., de la Noë, J. **113**, 118
- The Kinematical Structure of the Bipolar Nebula S 106
 Solf, J., Carsenty, U. **113**, 142
- The Galaxy NGC 1566: Distribution and Kinematics of the Ionized Gas
 Comte, G., Duquenois, A. **114**, 7
- 2-4 μ m Spectroscopy of the Compact H II Region G 45.13+0.14 A
 Krassner, J. **114**, 19
- Formaldehyde Absorption Towards OH Sources
 Forster, J.R., Boland, W. **114**, 109
- Kinematics of Ring-shaped Nebulae in the LMC. II. The Radial Velocity Field of N 185
 Rosado, M., Georgelin, Y.M., Georgelin, Y.P., Laval, A., Monnet, G. **115**, 61
- Aperture Synthesis Observations of Recombination Lines from Compact H II Regions. V. NGC 7538
 Goss, W.M., van Gorkom, J.H., Forster, J.R. **115**, 164
- The Effects of the Coronal Gas on the Champagne Phase
 Tenorio-Tagle, G., Bedijn, P.J. **115**, 207
- Far Infrared Observations of a Star Forming Region in Serpens
 Nordh, H.L., van Duinen, R.J., Sargent, A.I., Fridlund, C.V.M., Aalders, J.W.G., Beintema, D. **115**, 308
- The Giant Spiral Galaxy M 101. VIII. Star Formation in H I-H II Associations
 Viallefond, F., Goss, W.M., Allen, R.J. **115**, 373
- M1-67: A Wind-blown Bubble Carried Along by the High-velocity WR Star 209 BAC?
 Solf, J., Carsenty, U. **116**, 54
- Physical Conditions in H II/OH Maser Regions
 Guilloteau, S. **116**, 101
- Radio Continuum Emission: A Tracer for Star Formation
 Klein, U. **116**, 175
- A New Near-infrared Source in the Molecular Cloud Associated with S106
 Hofmann, R.G., Larson, H.P. **116**, 179
- Near Infrared Spectroscopy of W 51 IRS-2
 White, G.J., Phillips, J.P., Williams, P.M., Watt, G.D., Richardson, K.J. **116**, 293
- Westerbork H I observations of the H II region W 3
 Goss, W.M., Retallack, D.S., Felli, M., Shaver, P.A. **117**, 115
- NGC 2359: the H II-region driven by the WR-star HD 56925
 Goudis, C., Hippelein, H., Münch, G. **117**, 127
- The morphology and dynamics of the halo of the 30 Doradus Nebula
 Cox, P., Deharveng, L. **117**, 265
- Neutral hydrogen in the Cas OB6 association
 Braunsfurth, E. **117**, 297
- A survey of the distribution of λ 2.8 cm radio continuum in nearby galaxies. III. A small sample of irregular and blue compact galaxies
 Klein, U., Gräve, R., Wielebinski, R. **117**, 332
- Optical observations of the LMC H II region N 11
 Heydari-Malayeri, M., Testor, G. **118**, 116
- Emission-line spectra of H II regions: dependence on metal abundances in the atmosphere of the ionizing star and in the nebular gas
 Köppen, J., Schmid-Burgk, J., Scholz, M. **118**, 203
- A rediscussion of sulfur abundances in Magellanic Clouds and Galactic H II regions
 Dennefeld, M., Stasińska, G. **118**, 234
- Excitation conditions in H II regions
 Herter, T., Helfer, H.L., Pipher, J.L. **119**, 163; **51**, 195
- Morphology of the ionized gas in NGC 1313
 Marcelin, M., Gondoin, P. **119**, 166; **51**, 353
- H II regions in M 33. I. Radio and H α observations of the H II complex NGC 595
 Viallefond, F., Donas, J., Goss, W.M. **119**, 185
- The compact H II region S235A. Observations and interpretation
 Olofsson, G. **120**, 1
- VLA observations of H₂CO in DR 21
 Dickel, H.R., Lubenow, A.F., Goss, W.M., Forster, J.R., Rots, A.H. **120**, 74
- The origin of the nonthermal radio emission in normal disk galaxies
 Kennicutt, R. **120**, 219

- Aperture synthesis observations of Orion B at 2.695 and 8.085 GHz
Wink, J.E., Altenhoff, W.J., Webster, W.J., Jr. **120**, 322
- The Gum Nebula: new photometric and spectrophotometric results
Chanot, A., Sivan, J.P. **121**, 19
- Radiative excitation and the intensities of radio recombination lines
Hoang-Binh, D. **121**, L19
- Emission and absorption at 6 cm from excited OH associated with compact H II regions
Gardner, F.F., Martin-Pintado, J. **121**, 265
- A galaxy with a 3.2×2.2 kpc² H II region surrounding its nucleus
Meaburn, J. **122**, 111
- The radio structure of Sgr A
Ekers, R.D., van Gorkom, J.H., Schwarz, U.J., Goss, W.M. **122**, 143
- BG 1937+21: an extended radio source towards the millisecond Pulsar PSR 1937+21
Mantovani, F., Panagia, N., Tomasi, P. **123**, 347
- The molecular cloud-H II region complexes associated with Sh 90 and Sh 235
Lafon, G., Deharveng, L., Baudry, A., de La Noë, J. **124**, 1
- Biconical nebulae and early-type stars: a model for S 106
Dyson, J.E. **124**, 77
- The Cygnus X region. XIV. The radio continuum of the North America-Pelican nebulae
Wendker, H.J., Benz, D., Baars, J.W.M. **124**, 116
- Search for Wolf-Rayet features in the spectra of giant H II regions. I. Observations in NGC 300, NGC 604, NGC 5457, and He 2-10
D'Odorico, S., Rosa, M., Wampler, E.J. **124**, 154; 53, 97
- A new method of determining nebular radial velocities from Fabry-Perot interferograms
Thonnat, M., Ruffini, B., Caplan, J., Llebaria, A. **124**, 236
- The OIV infrared and ultraviolet flux ratios as temperature and density diagnostics
Hayes, M.A., Nussbaumer, H. **124**, 279
- A comparison of high resolution optical and radio observations of W 3
Dickel, H.R., Harten, R.H., Gull, T.R. **125**, 320
- Ammonia absorption toward W 3 (OH): 0"3 resolution maps in the (2,2) line
Guilloteau, S., Stier, M.T., Downes, D. **126**, 10
- The Rosette Nebula. I. An absolutely calibrated photoelectric H α surface photometry
Celnik, W.E. **126**, 222; 53, 403
- Observations of the ON 1 and ON 2 H II regions at 610 MHz
Matthews, H.E., Spoelstra, T.A.T. **126**, 433
- Non-metastable ammonia absorption toward compact H II regions
Wilson, T.L., Mauersberger, R., Walmsley, C.M., Batrla, W. **127**, L19
- Young stars and bubbles in the Large Magellanic Cloud
Braunsfurth, E., Feitzinger, J.V. **127**, 113
- An H76 α survey of galactic H II regions: electron temperature and element gradients
Wink, J.E., Wilson, T.L., Bieging, J.H. **127**, 211
- Theoretical radio continuum maps of H II regions in the champagne phase
Yorke, H.W., Tenorio-Tagle, G., Bodenheimer, P. **127**, 313
- Neon abundances in nearby H II regions
Thum, C., Nishimura, T. **127**, 383
- The velocity field of the ionized gas in NGC 2903
Marcelin, M., Boulesteix, J., Georgelin, Y. **128**, 140
- ### Halo
- Evidence for a Massive X-ray Halo around Markarian 541
Cash, W., Charles, P., Bowyer, S. **72**, L6
- The Ultraviolet Spectrum of the Hot Halo Star Feige 86
Hack, M. **74**, L4
- The Radio Continuum Halo of M 87
Andernach, H., Baker, J.R., Kap-Herr, A. von, Wielebinski, R. **74**, 93
- On the Dark Halo of NGC 4565
Dekel, A., Shalam, J. **74**, 186
- Are Massive Galactic Haloes Necessary to Prevent Rapid, Global Bar Formation?
Berman, R.H., Mark, J.W.-K. **77**, 31
- A Westerbork Map of Virgo A at 610 MHz
Kotanyi, C. **83**, 245
- BD + 33°2642: A Galactic Halo Blue Star Observed by IUE
Stalio, R., Franco, M.L. **84**, 369
- The Space Distribution of Metal-poor Stars of the Galactic Halo
Becker, W. **87**, 80
- On the Excitation of Warps in Galaxy Disks
Bertin, G., Mark, J.W.-K. **88**, 289
- A Study of the 5' Halo of 3C 84
Reich, W., Stute, U., Wielebinski, R. **89**, 204
- Galaxy Models with Live Halos
Sellwood, J.A. **89**, 296
- Highly Ionized Species in the Spectra of Small Magellanic Cloud Stars
Prévot, L., Laurent, C., Paul, J., Vidal-Madjar, A., Audouze, J., Ferlet, R., Lequeux, J., Maucherat-Joubert, M., Prévot-Burnichon, M.L., Rocca-Volmerange, B. **90**, L13
- Ultraviolet Observations of the Blue Halo Star: HD 93521
Ramella, M., Morossi, C., Santin, P. **90**, 146
- The Electron Temperatures of W 31 C and S 206
Carral, P., Rodriguez, L.F., Chaisson, E.J. **95**, 388
- The Extended Radio Continuum Emission Around M31
Gräbe, R., Emerson, D.T., Wielebinski, R. **98**, 260
- Limits of the Halo Component in Spiral Galaxies
Terzides, Ch.K. **99**, 144
- 408 MHz Observations of Clusters of Galaxies. I. Halo Sources in the Coma-A 1367 Supercluster
Ballarati, B., Feretti, L., Ficarra, A., Gavazzi, G., Giovannini, G., Nanni, M., Olori, M.C. **100**, 323
- A CH Star in the Direction of LMC
Fehrenbach, Ch., Duflo, M. **101**, 226
- Ultraviolet Observations of Two Extreme Population II Stars: Detection of Chromospheric Emission and Mass Loss
Spite, M., Caloi, V., Spite, F. **103**, L11
- On Some Extreme Metal-deficient Giants
Bartkevičius, A., Straizys, V. **104**, 215
- On the Evidence of a Massive Galactic Corona
Rohlf, K. **105**, 296
- The Optical Halo Around NGC 253
Beck, R., Hutschenreiter, G., Wielebinski, R. **106**, 112
- Excitation of Warps in Galaxies: Fluid Model of Disk-halo Interaction
Bertin, G., Casertano, S. **106**, 274
- On the Transport and Propagation of Relativistic Electrons in Galaxies. The Effect of Adiabatic Deceleration in a Galactic Wind for the Steady State Case
Lerche, I., Schlickeiser, R. **107**, 148

- Status of evolution of F, G, and K field stars contained in the [Fe/H] catalogue
Cayrel de Strobel, G., Bentolila, C. **119**, 1
- Mass function for massive stars
Bisicchi, G.F., Firmani, C., Sarmiento, A.F. **119**, 167
- An ultraviolet approach to M 15
Nesci, R. **121**, 226
- Predicted and observed UV spectrum of M 5
Nesci, R. **121**, 325
- Positions, magnitudes and colours for stars in the core of M 3
Aurière, M., Cordoni, J.-P. **123**, 358; **52**, 383
- Positions, magnitudes, and colors for stars in the globular cluster M92
Buonanno, R., Buscema, G., Corsi, C.E., Iannicola, G., Smriglio, F., Fusi Pecci, F. **124**, 151; **53**, 1
- NGC 6256, a galactic globular cluster
Alcaino, G. **124**, 152; **53**, 47
- The relation between the luminosity of the brightest blue star and the luminosity of its parent galaxy
Schild, H., Maeder, A. **127**, 238
- Overshooting from convective cores and the occurrence of loops in the HRD. II. Evolution of 5 M_{\odot} stars to the Cepheid phase
Huang, R.Q., Weigert, A. **127**, 309
- High Velocity Clouds**
- Intermediate Velocity Clouds in the Region of the South Celestial Pole
Morris, R. **92**, 315
- High-Velocity Gas Toward the Galactic Center
Güsten, R., Downes, D. **99**, 27
- H I Fine Structure in a High Velocity Cloud (HVC A1)
Schwarz, U.J., Oort, J.H. **101**, 305
- Fine Structure in High Velocity Clouds Near the South Celestial Pole
Morris, R. **115**, 249
- New observations of positive high velocity clouds
Morris, R., Bajaja, E. **118**, 210; **51**, 131
- High Velocity Stars**
- Detailed Analysis of High Velocity Stars
Foy, R. **85**, 287
- Radial Velocities from Objective-prism Plates in the Direction of the Large Magellanic Cloud (Text in French)
Fehrenbach, Ch., Duflot, M. **110**, 182; **48**, 409
- Horizontal Branch Stars**, see also Clusters, globular; RR Lyrae Stars
- Theoretical $B-V$ Color Indices and Bolometric Corrections for Hot Horizontal Branch Stars
Rossi, L. **74**, 195
- A Theoretical Scenario for the Evolutionary Status of HB Stars in RR-Lyrae Rich Galactic Globular Clusters
Castellani, V., Tornambé, A. **96**, 207
- Possible Red Horizontal Branch Stars in the Galactic Field
Straizys, V., Bartkevičius, A., Sperauskas, J. **99**, 152
- Helium Diffusion in Horizontal-Branch-Star Evolutionary Models
Giannone, P., Rossi, L. **102**, 386
- RR Lyrae Populations in the Galactic Field
Castellani, V., Maceroni, C., Tosi, M. **102**, 411
- On the stellar content of the galactic globular cluster M5
Altamore, A., Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **118**, 332
- IUE observations of the nucleus of the galactic globular cluster NGC 2808
Caloi, V., Castellani, V. **121**, 198
- Abundances in metal-poor stars. III. Eleven field giants
Gratton, R.G. **123**, 289
- Membership of above horizontal branch stars in the globular cluster NGC 5466
Brosche, P., Geffert, M. **127**, 415
- Helium abundance in globular clusters: the R-method
Buzzoni, A., Fusi Pecci, F., Buonanno, R., Corsi, C.E. **128**, 94
- HR Diagram**, see Hertzsprung Russell Diagram
- Hubble Constant**, see also Cosmology, Redshift
- Diameter Luminosity Relation. IV. Application to the Determination of the Hubble-constant
Paturel, G. **71**, 19
- Cosmic Distances from X-ray and Microwave Observations of Clusters of Galaxies
Cavaliere, A., Danese, L., Zotti, G. **75**, 322
- Quasars, Isotropy of H_0 and the Local Supercluster of Galaxies
Reboul, H.J. **89**, 272
- Upper Limits on the Hubble Modulus Anisotropy Provided by Cosmic-microwave Background Observations
Dominguez-Tenreiro, R. **93**, 306
- The Formation of Cavities around Cosmological Condensations
Occhionero, F., Vecchia-Scavalli, L., Vittorio, N. **97**, 169
- New Study on Quasars and Isotropy of H_0
Reboul, H.J. **108**, 85
- On the Peculiar Motion of the Local Group as Revealed by the $B-V$ vs. HM Relation for Sc I Galaxies
Teerikorpi, P. **109**, 314
- Two Bright Supernovae in NGC 6946 and NGC 4536
Barbon, R., Ciatti, F., Rosino, L. **116**, 35
- Spectra and Light Curves of Three Recent Supernovae
Barbon, R., Ciatti, F., Rosino, L., Ortolani, S., Rafanelli, P. **116**, 43
- H I line studies of galaxies. II. The 21-cm line width as an extragalactic distance indicator
Bottinelli, L., Gouguenheim, L., Paturel, G., de Vaucouleurs, G. **118**, 4
- The relation between the luminosity of the brightest blue star and the luminosity of its parent galaxy
Schild, H., Maeder, A. **127**, 238
- Hydrodynamics, Hydromagnetics**, see also Accretion, Density Waves, Dynamo Theory, Gas Dynamics, Magnetohydrodynamics, Plasma Physics
- Hydromagnetic Wave Modes in Magnetic Flux Tubes
Wilson, P.R. **71**, 9
- The Supergranulation: Solar Rip Currents?
Cloutman, L.D. **74**, L1
- Gas Flow in the Disk of the Galaxy NGC 4258. I. A First Two-dimensional Model
Icke, V. **74**, 42
- Waves in the Low Solar Chromosphere
Schmieder, B. **74**, 273
- A Comparison of Two Independent Calculations of the Axisymmetric Collapse of Rotating Protostar
Bodenheimer, P., Tscharnuter, W. **74**, 288
- Hydromagnetic Surface Waves on Cylindrical Flux Tubes
Wentzel, D.G. **76**, 20

- Three-dimensional Numerical Models of the Collapse of Turbulent Interstellar Clouds
Różyczka, M., Tscharnuter, W.M., Yorke, H.W. **81**, 347
- Accretion of Gas by a Schwarzschild Black Hole
Ray, D. **82**, 368
- Fragmentation of Interstellar Clouds: Three-dimensional Hydrodynamical Calculations
Różyczka, M., Tscharnuter, W.M., Winkler, K.-H., Yorke, H.W. **83**, 118
- X-ray Induced Shocks in Stellar Winds
Fransson, C., Fabian, A.C. **87**, 102
- Cellular Convection in a Stratified Atmosphere
Massager, J.M., Zahn, J.-P. **87**, 315
- Flows along Magnetic Flux Tubes. I. Equilibrium and Buoyancy of a Slender Magnetic Loop in the Interior of a Star
Schüssler, M. **89**, 26
- Normal Modes of Rotating Fluids
Sobouti, Y. **89**, 314
- Late-stage Evolution of a Supernova Remnant. The Structure of the Dense Shell
Preite-Martinez, A. **96**, 283
- On the Value of the Masses of Neutron Stars in the Parametrized Post Newtonian Formalism
Ciufolini, I., Ruffini, R. **97**, L12
- Mechanical Flux in the Solar Chromosphere. III. Variation of the Mechanical Flux
Mein, N., Schmieder, B. **97**, 310
- Comments on Smoothed Particle Hydrodynamics
Schüssler, M., Schmitt, D. **97**, 373
- Some Problems with the Evolution of Gas in Clusters of Galaxies
Nepveu, M. **101**, 362
- An Analytical Model for Stellar Coronae
Martens, P.C.H. **102**, 156
- Heating of Stellar Chromospheres when Magnetic Fields are Present
Ulmschneider, P., Stein, R.F. **106**, 9
- On the Theory of Thermally Sustained Stellar Winds
Souffrin, P. **106**, 14
- Stability of Toroidal Flux Tubes in Stars
Spruit, H.C., van Ballegooijen, A.A. **106**, 58
- Numerical Simulations of the Solar Granulation. I. Basic Equations and Methods
Nordlund, Å. **107**, 1
- On the Thermal Stability of Hot Coronal Loops: The Coupling Between Chromosphere and Corona
Kuin, N.P.M., Martens, P.C.H. **108**, L1
- A Comparative Study of Computational Methods in Cosmic Gas Dynamics
van Albada, G.D., van Leer, B., Roberts, W.W., Jr. **108**, 76
- Incompressible Convection in a Radiating Atmosphere. I. General Characteristics
Legait, A. **108**, 287
- Planetary Nebulae with Close Binary Nuclei-corrections to Angular Momentum Loss
Salzman, J., Livio, M., Shaviv, G. **109**, 201
- The Structure of Cosmic Ray Shocks
Axford, W.I., Leer, E., McKenzie, J.F. **111**, 317
- Meridional Circulation in Optically Thick Accretion Disks
Cabot W., Savedoff, M.P. **112**, L1
- The Gas Dynamics Around OB Associations. II. Dependence on the Initial Ambient Density
Tenorio-Tagle, G., Beltrametti, M., Bodenheimer, P., Yorke, H.W. **112**, 104
- Nonlinear Shear Instabilities in an Infinite Slab
Nepveu, M. **112**, 223
- Erratum: Stability of Toroidal Flux Tubes in Stars
Spruit, H.C., van Ballegooijen, A.A. **113**, 350
- 3D Models for Self-gravitating, Rotating Magnetic Interstellar Clouds
Dorfi, E. **114**, 151
- Hydrodynamical Calculations of Accretion Disks in Close Binary Systems. I. Method
Hensler, G. **114**, 309
- Hydrodynamical Calculations of Accretion Disks in Close Binary Systems. II. Models
Hensler, G. **114**, 319
- How Well is Gas Mixed in Clusters of Galaxies?
Nepveu, M. **114**, 337
- The Effects of the Coronal Gas on the Champagne Phase
Tenorio-Tagle, G., Bedijn, P.J. **115**, 207
- Shock Fronts Produced by Stellar Winds in the Interstellar Gas
Huang, R.Q., Weigert, A. **116**, 348
- Coronal heating by phase-mixed shear Alfvén waves
Heyvaerts, J., Priest, E.R. **117**, 220
- Pressure distribution at the inner boundary of an astropause caused by a compressible stellar wind
Fahr, H.J., Neutsch, W. **118**, 57
- A numerical study of the nonlinear Rayleigh-Taylor instability, with application to accreting X-ray sources
Wang, Y.-M., Nepveu, M. **118**, 267
- On the stability of toroidal flux tubes in differentially rotating stars
van Ballegooijen, A.A. **118**, 275
- Helicity and α -effect of simple convection cells
Stix, M. **118**, 363
- MHD wave motion in magnetically structured atmospheres
Rae, I.C., Roberts, B. **119**, 28
- Velocity fluctuations in the interstellar medium due to the gravitational interaction with the system of stars
Kegel, W.H., Völk, H.J. **119**, 101
- Gravitational collapse and fragmentation of isothermal, non-rotating, cylindrical clouds
Bastien, P. **119**, 109
- Dynamics of solar filaments. II. Mass motions in an active region filament from H α center to limb observations
Malherbe, J.M., Schmieder, B., Ribes, E., Mein, P. **119**, 197
- An exact solution for an isothermal gas cloud with fast differential rotation
Schmitz, F. **120**, 234
- Quasi-axisymmetric circulation and superrotation in planetary atmospheres
Mayr, H.G., Harris, I. **121**, 124
- On the influence of the " α -turbulence" on the energy transport in accretion disks
Duschl, W.J. **121**, 153
- Rise times of horizontal magnetic flux tubes in the convection zone of the Sun
Moreno-Inertis, F. **122**, 241
- The thermal evolution of resonantly heated coronal loops
Martens, P.C.H., Kuin, N.P.M. **123**, 216
- Solar-type U bursts and coronal transients
Leblanc, Y., Poquéusse, M., Aubier, M.G. **123**, 307
- Mass and energy balance in the 1973 August 9 flare
Dere, K.P., Cook, J.W. **124**, 181

The molecular weight barrier and angular momentum transport in radiative stellar interiors

Knobloch, E., Spruit, H.C. **125**, 59

Acoustic waves in early-type stars. I. An efficient method for the computation of thermodynamic quantities in time-dependent stellar atmosphere calculations

Wolf, B.E. **127**, 93

The structure of oblique MHD cosmic-ray shocks

Webb, G.M. **127**, 97

Theoretical radio continuum maps of H II regions in the champagne phase

Yorke, H.W., Tenorio-Tagle, G., Bodenheimer, P. **127**, 313

H α , see also Line Profiles

Kinematics of Old Supernova Remnants

Lozinskaya, T.A. **84**, 26

Photométrie Photoélectrique de Nébuleuses Gazeuses Diffuses dans la Raie H α

Vidal, J.L. **84**, 268; **40**, 33

A Study of H α Profile Variations in κ Orionis, B 0.5 Ia

Rusconi, L., Sedmak, G., Stalio, R., Arpigny, C. **92**, 324; **42**, 347

A Very-wide-field, High Luminosity, and High Spectral Resolution Camera for the Observation of the Diffuse, Ionized Component of the Galactic Interstellar Medium

Courtès, G., Sivan, J.P., Saisse, M. **97**, 334

Standard Stars for H α Photometry

Strauss, F.M., Ducati, J.R. **100**, 331; **44**, 337

Discoveries on Southern, Red Sensitive Objective-prism Plates III: New Stars Having H α in Emission

MacConnell, D.J. **100**, 333; **44**, 387

A Catalogue of Observations in H α

Ducati, J.R. **101**, 420; **45**, 119

High Resolution Observations of the H α Profile from η Car

Melnick, J., Ruiz, M.T., Maza, J. **111**, 375

The Rosette Nebula. I. An absolutely calibrated photoelectric H α surface photometry

Celnik, W.E. **126**, 222; **53**, 403

The Sun among the stars. VII. The H α profile of the Sun and the solar analog 16 Cygni B

Hardorp, J., Tomkin, J. **127**, 277

Identification, see Optical Identification

Infrared Radiation, see also OH Sources, and under the different Objects

Atmosphere Transparency and Infrared Astronomy at the Gornegrat

Bensammar, S. **72**, 186

On the Formation and Destruction of He H $^+$ in Gaseous Nebulae and the Associated Infra-red Emission Line Spectrum

Flower, D.R., Roueff, E. **72**, 361

Infrared Emission by Dust Grains near Variable Primary Sources. I. General Considerations

Bode, M.F., Evans, A. **73**, 113

Observations of New Far Infrared Sources in the Cepheus OB3 Molecular Cloud

Koppelaar, K., Sargent, A.I., Nordh, L., Duinen, R.J. van, Aalders, J.W.G. **75**, L1

On the Far-infrared Diffuse Galactic Emission

Drapatz, S. **75**, 26

On Polarization by Dust in the Mid-infrared

Thronson, H.A., Jr. **75**, 236

A Comparison of High Resolution Radio and Far-infrared Maps of M 17

Wilson, T.L., Fazio, G.G., Jaffe, D., Kleinmann, D., Wright, E.L., Low, F.J. **76**, 86

Far Infrared Diffuse Emission from the Galactic Plane. II. The Longitude Profile

Serra, G., Boissé, P., Gispert, R., Wijnbergen, J., Ryter, C., Puget, J.L. **76**, 259

On the Middle Infra-red Fluorescence and Absorption of Molecules in Grain Mantles

Allamandola, L.J., Greenberg, J.M., Norman, C.A. **77**, 66

Astronomical Applications of Infra-red Television Imaging

Lamy, P.L., Nguyen-Trong, T., Adjabschirzadeh, A., Koutchmy, S. **77**, 257

Formaldehyde Kinematics and Distribution near the Cone Nebula and IR Source in NGC 2264

Greenberg, J.M., Minn, Y.K., Tielens, A.G.G.M. **78**, 100

How Can We Measure the Extragalactic Infrared Background?

Fabbri, R., Melchiorri, F. **78**, 376

Angular Diameter of IRC + 10216, Mira, R Cas, and GL 2591 in the near Infrared

Foy, R., Chelli, A., Sibille, F., Léna, P. **79**, L5

Infrared Speckle Interferometry

Sibille, F., Chelli, A., Léna, P. **79**, 315

Infrared Spectroscopy with a Balloon-borne Michelson Interferometer. I. Instrumentation and Performance

Anderegg, M., Moorwood, A.F.M., Salinari, P., Furniss, I., Jennings, R.E., King, K.J., Towlson, W.A., Venis, T.E. **82**, 86

Use of the Infra-red Flux Method for Determining Stellar Effective Temperatures and Angular Diameters; the Stellar Temperature Scale

Blackwell, D.E., Petford, A.D., Shallis, M.J. **82**, 249

The IR-excess of Helium-variable Stars

Groote, D., Hunger, K., Schultz, G.V. **83**, L5

Far Infrared Emission from the Galactic Plane. I. Observations at the Galactic Longitude $l^{\text{II}} = 27.5^\circ$

Viallefond, F., Léna, P., de Muizon, M., Nicollier, C., Rouan, D., Wijnbergen, J.J. **83**, 22

Far Infrared Study of Molecular Clouds: Dust Temperature Profiles in S 140, IC 1396, RCrA

de Muizon, M., Rouan, D., Léna, P., Nicollier, C., Wijnbergen, J. **83**, 140

Measurements of the Absolute Solar Brightness Temperature in the Far-infrared with a Balloon-borne Interferometer

Rast, J., Cartier, F., Kneubühl, F.K., Huguenin, D., Müller, E.A. **83**, 199

Star Formation in the Inner Galaxy from Near and Far Infrared Observations

Serra, G., Puget, J.L., Ryter, C.E. **84**, 220

Infra-red Absorption Lines by Molecules in Grain Mantles

Hagen, W., Allamandola, L.J., Greenberg, J.M. **86**, L1

Variability of the Far-Infrared Solar Temperature Minimum with the Solar Cycle

Müller, E.A., Kneubühl, F.K., Rast, J., Stettler, P. **87**, L3

Infrared Spectroscopy with a Balloon Borne Michelson Interferometer. II. Observation of O III, O I, and N III Fine Structure Lines in H II Regions

Moorwood, A.F.M., Salinari, P., Furniss, I., Jennings, R.E., King, K.J. **90**, 304

A Low-luminosity Far Infrared Source in the L 1551 Molecular Cloud

Fridlund, C.V.M., Nordh, H.L., van Duinen, R.J., Aalders, J.W.G., Sargent, A.I. **91**, L1

- Alfvén-driven Cyclotron Corona as a Model for Quasar Infrared
Zurek, W.H. **91**, 90
- Near Infrared Polarimetry of Cool Stars
McCall, A., Hough, J.H. **91**, 379; **42**, 141
- Comment on "Variability of the Far-infrared Solar Temperature Minimum with the Solar Cycle"
Cook, J.W., Brueckner, G.E., VanHoosier, M.E. **92**, L7
- Discovery of the Exciting Star in the North America-Pelican Nebula Complex?
Neckel, Th., Harris, A.W., Eiroa, C. **92**, L9
- Infrared Photometry of HDE 226868 (Cyg X-1) from 2.3 to 10 μ : Mass Loss Rate
Persi, P., Ferrari-Toniolo, M., Grasdalen, G.L., Spada, G. **92**, 238
- Infrared Spectra of Hydrated Silicates, Carbonaceous Chondrites, and Amorphous Carbonates Compared with Interstellar Dust Absorptions
Knacke, R.F., Krätschmer, W. **92**, 281
- A Far-infrared Survey of the Milky Way from Sagittarius to Cygnus: Evidence for Large Scale Variations of the Star Formation Rate and Initial Mass Function
Boissé, P., Gispert, R., Coron, N., Wijnbergen, J.J., Serra, G., Ryter, C., Puget, J.L. **94**, 265
- Observations of Late Type Objects with a New Spectrophotometer in the 8-13 μ m Range
Schulte in den Bäumen, J., Hefele, H., Hölzle, E., Ortlieb, N. **94**, 280
- Infrared Objects Near to H₂O Masers in Regions of Active Star Formation
Moorwood, A.F.M., Salinari, P. **94**, 299
- Infrared Light Curves of the Contact Binary 44 i Bootis
Bergeat, J., van't Veer, F., Lunel, M., Garnier, R., Sibille, F., Roux, S. **94**, 350
- Far Infrared Observations of S 255 and S 187
Sargent, A.I., van Duinen, R.J., Nordh, H.L., Aalders, J.W.G. **94**, 377
- Near Infrared Observations of the H II Region S 146
Eiroa, C., Neckel, Th., Sanchez Magro, C., Selby, M.J. **95**, 206
- New Compact Infrared Objects Associated with Two Southern Type-I OH Masers
Epchtein, N., Guibert, J., Nguyen-Quang-Rieu, Turon, P., Wamsteker, W. **97**, 1
- Observations of Diffuse Far Infrared Emission and Distribution of Interstellar Dust
Maihara, T., Oda, N., Shibai, H., Okuda, H. **97**, 139
- Standard Stars and Calibration for JHKLM Photometry
Wamsteker, W. **97**, 329
- Spectral Energy Distribution and Effective Temperature Scale of M-giant Stars. II. Application of the Infra-red Flux Method
Tsuji, T. **99**, 48
- Infrared Reflection Nebulae in S 106 and NGC 7538 E
Tokunaga, A.T., Lebofsky, M.J., Rieke, G.H. **99**, 108
- I and R Image Tube Photographs of AFCRL Sources
Eiroa, C. **99**, 203; **44**, 77
- Infrared Survey of Southern Galactic Maser Sources in the Longitude Range 320° to 30°
Epchtein, N., Lépine, J.R.D. **99**, 210
- A Near Infrared Map of M 17
Lemke, D., Harris, A.W. **99**, 285
- Infrared and X-ray Observations of the Binary System V 861 Sco
Tanzi, E.G., Maraschi, L., Treves, A., Tarengi, M. **100**, 68
- Distribution of Near Infrared Sources in the Galactic Disk
Hayakawa, S., Matsumoto, T., Murakami, H., Uyama, K., Thomas, J.A., Yamagami, T. **100**, 116
- Observation of the Extreme Solar Limb at 3.9 μ m During the Partial Solar Eclipse of 10 July, 1972
Clark, T.A., Clay, R.W. **100**, 254
- Near Infrared High Resolution Spectrophotometry of Forbidden [C I] in the Orion Nebula
Cosmovici, C.B., Strafella, F., Iijima, T. **101**, 397
- Infrared Observations of Southern Bright Stars
Engels, D., Sherwood, W.A., Wamsteker, W., Schultz, G.V. **101**, 417; **45**, 5
- Infrared Objects Near to H₂O Masers in Regions of Active Star Formation. II. Survey and 1-20 μ m Observations of Southern Sources
Moorwood, A.F.M., Salinari, P. **102**, 197
- The Distance to G316.8-0.1
Shaver, P.A., Retallack, D.S., Wamsteker, W., Danks, A.C. **102**, 225
- Infrared Lines of O I and C A II in Be Stars with Paschen Emission Lines
Briot, D. **103**, 1
- High Resolution Spectrophotometry of the O I Line (8446 Å) Towards Cyg OB2 No. 12
Iyengar, K.V.K., Stafella, F., Cosmovici, C.B. **103**, 382
- On the Ice Content of the KL Nebula in Orion
Papoular, R. **104**, L1
- Polarimetric Observations of S 106
Lacasse, M.G., Boyle, D., Levreault, R., Pipher, J.L., Sharpless, S. **104**, 57
- Far IR Emission of the Galactic Plane at High Longitudes
Bussolletti, E., Guidi, I., Melchiorri, F., Natale, V. **105**, 184
- Observations of NGC 604 over Six Decades in Frequency
Israel, F.P., Gatley, I., Matthews, K., Neugebauer, G. **105**, 229
- The Origin of the Diffuse Galactic Far Infrared and Sub-millimeter Emission
Mezger, P.G., Mathis, J.S., Panagia, N. **105**, 372
- Erratum: Infrared Lines of O I and C A II in Be Stars with Paschen Emission Lines
Briot, D. **105**, 422
- Far Infrared Survey of Extended Molecular Clouds H II Regions Complexes Along the Galactic Plane
Gispert, R., Puget, J.L., Serra, G. **106**, 293
- Infrared Scans of Gamma Ray Burst Source Regions
Apparao, K.M.V., Allen, D.A. **107**, L5
- Upper Limits of a Cosmic Infrared Background Flux as Determined by X- and Gamma-ray Observations of M87
Schlickeiser, R., Harwit, M. **107**, 186
- New Infrared Counterparts of Southern Type II OH Maser Sources
Epchtein, N., Nguyen-Quang-Rieu **107**, 229
- Infrared Photometry of Southern Be Stars
Dachs, J., Wamsteker, W. **107**, 240
- Mid-infrared Observations of Seyfert 1 and Narrow-line X-ray Galaxies
Glass, I.S., Moorwood, A.F.M., Eichendorf, W. **107**, 276
- Spectroscopy and Infrared Photometry of Cyg OB 2 Stars: Velocity Law and Mass-loss Rates
Leitherer, C., Hefele, H., Stahl, O., Wolf, B. **108**, 102
- On the Infrared Sources 1 and 2 in NGC 7538
Elsässer, H., Birkle, K., Eiroa, C., Lenzen, R. **108**, 274

- Radio, Infrared, and Optical Observations of Compact H II Regions. IV. The Nebula S235B
Krassner, J., Pipher, J.L., Sharpless, S., Herter, T. **109**, 223
- Near-infrared Slit Scans of Molecular Cloud Sources. II
Dyck, H.M., Staupe, H.J. **109**, 320
- Evaluation of Infrared Line Emission from Constituent Molecules of Cometary Nuclei
Yamamoto, T. **109**, 326
- Metallicity Effect and λ 2.4 μ m Excess in the Galactic Disk
Guiderdoni, B., Rocca-Volmerange, B. **109**, 355
- 415 μ m Brightness Temperature of Titan
Loewenstein, R.F., Hildebrand, R.H. **110**, L18
- Interferometric Measurements of Stellar Positions in the Infrared
Sutton, E.C., Subramanian, S., Townes, C.H. **110**, 324
- Circumstellar Shells in M 17
Chini, R. **110**, 332
- Infrared Energy Distribution of Cyg. OB2 No. 12
Persi, P., Ferrari-Toniolo, M. **111**, L7
- New Infrared Objects Towards Southern Type I OH and H₂O Masers
Braz, M.A., Epchtein, N. **111**, 91
- On Solar Hydrogen Lines in the Far-infrared and Submillimeter Spectrum
Hoang-Binh, D. **112**, L3
- A Spectrophotometric Study of Kepler Supernova Remnant
Dennefeld, M. **112**, 215
- A First Order Approximation Model of CO₂ Infrared Bands in the Venusian Lower Thermosphere
Battaner, E., Rodrigo, R., López-Puertas, M. **112**, 229
- Near-infrared Sources in the NGC 6334 Molecular Cloud
Persi, P., Ferrari-Toniolo, M. **112**, 292
- Multiperture Photometry of Galaxies. II. Near-infrared Observations of Six Isolated Objects
Brosch, N., Isaacman, R. **113**, 231
- 2-4 μ m Spectroscopy of the Compact H II Region G 45.13+0.14 A
Krassner, J. **114**, 19
- Infrared Emission and Star Formation in NGC 5253
Moorwood, A.F.M., Glass, I.S. **115**, 84
- Infrared Observations of OH/IR Stars
Willems, F., de Jong, T. **115**, 213
- Far Infrared Observations of a Star Forming Region in Serpens
Nordh, H.L., van Duinen, R.J., Sargent, A.I., Fridlund, C.V.M., Aalders, J.W.G., Beintema, D. **115**, 308
- CO J=3 \rightarrow 2 and Submillimetre Continuum Observations of Two Molecular Outflow Sources
Phillips, J.P., White, G.J., Ade, P.A.R., Cunningham, C.T., Richardson, K.J., Robson, E.I., Watt, G.D. **116**, 130
- A New Near-infrared Source in the Molecular Cloud Associated with S106
Hofmann, R.G., Larson, H.P. **116**, 179
- Near Infrared Spectroscopy of W 51 IRS-2
White, G.J., Phillips, J.P., Williams, P.M., Watt, G.D., Richardson, K.J. **116**, 293
- The processing of infrared sky noise by chopping, nodding and filtering
Papoular, R. **117**, 46
- The three micron "ice" band in grain mantles
Hagen, W., Tielens, A.G.G.M., Greenberg, J.M. **117**, 132
- Properties of amorphous H₂O ice and origin of the 3.1 μ m absorption
Léger, A., Gauthier, S., Défourneau, D., Rouan, D. **117**, 164
- Abnormal extinction and dust properties in M 16, M 17, NGC 6357 and the Ophiuchus dark cloud
Chini, R., Krügel, E. **117**, 289
- Near infrared spectroscopy and infrared photometry of a new WC9 star
Danks, A.C., Dennefeld, M., Wamsteker, W., Shaver, P.A. **118**, 301
- Detection of large infrared polarization from L 1551 IRS 5
Nagata, T., Sato, S., Kobayashi, Y. **119**, L1
- A two-micron survey of southern Herbig-Haro objects
Reipurth, B., Wamsteker, W. **119**, 14
- Performance of Si: Ga infrared detectors under reduced backgrounds fluxes
Wolf, J., Lemke, D. **119**, 294
- Near-infrared photometry. I. Homogenization of near-infrared data from southern bright stars
Koornneef, J. **119**, 326; **51**, 489
- The compact H II region S235A. Observations and interpretation
Olofsson, G. **120**, 1
- Infrared photometry of southern Wolf-Rayet stars
Pitault, A., Epchtein, N., Gómez, A.E., Lortet, M.C. **120**, 53
- A discussion of the infrared and radio region of the calculated spectral energy distribution of O-type stars
Groot, M., Thé, P.S. **120**, 89
- Infrared speckle imaging: improvement of the method; results on Miras and protostars
Mariotti, J.M., Chelli, A., Foy, R., Léna, P., Sibille, F., Tchountonov, G. **120**, 237
- Hydrogen line ratios of low redshift QSO's
Kollatschny, W., Fricke, K.J. **122**, 33
- Status of laboratory experiments on ice mixtures and on the 12 μ m H₂O ice feature
Kitta, K., Krätschmer, W. **122**, 105
- Molecular hydrogen lines in the infrared spectra of M-giant stars
Tsuji, T. **122**, 314
- IRAS Circular No. 1 **123**, C1
- Infrared and microwave fluorescence of carbon monoxide in comets
Crovisier, J., Le Boulbot, J. **123**, 61
- Three-micron emission features in Herbig Be/Ae stars and related objects
Whittet, D.C.B., Williams, P.M., Bode, M.F., Davies, J.K., Zealey, W.J. **123**, 301
- IRAS Circular No. 2 **124**, C1
- The nature of OH/IR stars. I. Infrared Mira variables
Engels, D., Kreysa, E., Schultz, G.V., Sherwood, W.A. **124**, 123
- Infrared colors of the chemically peculiar stars of the upper main sequence
Bonsack, W.K., Dyck, H.M. **125**, 29
- Infrared objects near H₂O masers in regions of active star formation. III. Evolutionary phases deduced from IR recombination line and other data
Moorwood, A.F.M., Salinari, P. **125**, 342
- On the T Tauri nature of the variable star BM Cha
Krautter, J., Mouchet, M. **125**, 378
- Infrared fluorescence of molecules in comets: the general synthetic spectrum
Crovisier, J., Encrenaz, Th. **126**, 170
- Infrared photometry of the RS CVn binaries. III. JHK light curves of UV Psc
Antonopoulou, E. **126**, 221; **53**, 347

- A heterodyne spectrometer for astronomical measurements at 10 micrometers
Rothermel, H., Käußl, H.U., Yu, Y. **126**, 387
- The LMC emission line star S22 (=HD 34664). III. Ultraviolet to infrared energy distribution
Bensammar, S., Friedjung, M., Muratorio, G., Viotti, R. **126**, 427
- Short-timescale IR variation of SS 433
Kodaira, K., Lenzen, R. **126**, 440
- IRAS Circular No. 3 **127**, C1
- The Crab Nebula. II. Near-infrared spectrophotometry of a bright filament
Dennefeld, M., Péquignot, D. **127**, 42
- The maser strength of OH/IR stars, evolution of mass loss and the creation of a superwind
Baud, B., Habing, H.J. **127**, 73
- Neon abundances in nearby H II regions
Thum, C., Nishimura, T. **127**, 383
- Mid-infrared maps of the Orion molecular cloud core
Lee, T.J., Beattie, D.H., Geballe, T.R., Pickup, D.A. **127**, 417
- Catalogue of non-stellar molecular maser sources and their probable infrared counterparts in the galactic plane
Braz, M.A., Epchtein, N. **127**, 425; **54**, 167
- IRAS Circular No. 4 **128**, C1
- Near-infrared photometry. II. Intrinsic colours and the absolute calibration from one to five micron
Koorneef, J. **128**, 84
- Far-infrared spectrophotometry of the Orion Molecular Cloud 1 ridge
Drapatz, S., Haser, L., Hofmann, R., Oda, N., Iyengar, K.V.K. **128**, 207
- OH/IR stars within one degree of the galactic centre
Habing, H.J., Olmon, F.M., Winnberg, A., Matthews, H.E., Baud, B. **128**, 230
- Ground-based infrared spectrophotometry of evolved objects and late-type stars
Eiroa, C., Hefele, H., Zhong-yu, Q. **128**, 262; **54**, 309
- The IR silicate features as a measure of grain size in circumstellar dust
Papoular, R., Pégourié, B. **128**, 335
- Instability**, see also **Datability**
- Instabilities in Molecular Hydrogen Clouds
Giaretta, D.L. **78**, 328
- Magnetohydrodynamic Instabilities and Electron Acceleration in Extended Extragalactic Radio Sources
Ferrari, A., Trussoni, E., Zaninetti, L. **79**, 190
- Turbulent Mixing of Stellar Winds and Interstellar Gas
Kahn, F.D. **83**, 303
- On Shear Layers in Double Radio Sources
Nepveu, M. **84**, 14
- Magneto-parametric Instabilities IV
Luheshi, M., Stewart, P. **86**, 163
- Are Solar Coronal Loops in Thermal Equilibrium?
Hood, A.W., Priest, E.R. **87**, 126
- On Absolute and Convective Instabilities
Giaretta, D.L. **88**, 113
- The Time Scale of Thermohaline Mixing in Stars
Kippenhahn, R., Ruschenplatt, G., Thomas, H.-C. **91**, 175
- Bar Instability and Rotation Curves
Sellwood, J.A. **99**, 362
- Gravity Modes Instability in DA White Dwarfs
Dolez, N., Vauclair, G. **102**, 375
- The Unsteady Beam
Nepveu, M. **105**, 15
- Plasma-magnetospheric Interaction in X-ray Sources: An Analysis of the Linear Kelvin-Helmholtz Instability
Wang, Y.-M., Welter, G.L. **113**, 113
- Stability of Differential Rotation in Stars
Knobloch, E., Spruit, H.C. **113**, 261
- The Thermal Stability of Solar Coronal Loops in Hydrostatic Equilibrium
Wragg, M.A., Priest, E.R. **113**, 269
- A numerical study of the nonlinear Rayleigh-Taylor instability, with application to accreting X-ray sources
Wang, Y.-M., Nepveu, M. **118**, 267
- A new instability during nuclear shell burning
Kippenhahn, R., Thomas, H.-C. **124**, 206
- The molecular weight barrier and angular momentum transport in radiative stellar interiors
Knobloch, E., Spruit, H.C. **125**, 59
- Determination of physical parameters in extragalactic radio jets from large scale, small amplitude oscillations
Ferrari, A., Trussoni, E., Zaninetti, L. **125**, 179
- The MHD Kelvin-Helmholtz instability in the solar photosphere
Rae, I.C. **126**, 209
- A possible explanation of the Wilson-Bappu relation and the chromospheric temperature rise in late-type stars
Kneer, F. **128**, 311
- Instability Strip**
- HR 2724 - A New Bright Variable in the δ Scuti Instability Strip
Baade, D., Stahl, O. **114**, 131
- Instruments**, see also **Observational Methods**, **Radio Telescopes**
- Array Detectors for Millimetre Line Astronomy
Gillespie, A.R., Phillips, T.G. **73**, 14
- Suggestions for Modifying the Linear Dollfus Polarimeter
Chen, P.C. **74**, 118
- Complementing Aperture Synthesis Radio Data by Short Spacing Components from Single Dish Observations
Bajaja, E., Albada, G.D. van **75**, 251
- Standing Wave and Pellicle: A Possible Approach to Very Large Space Telescopes
Labeyrie, A. **77**, L1
- The New Photographic Astrolabe at the Turku Observatory
Niemi, A. **80**, 174
- A Wavelength Calibration Device for Large Dispersion Spectrographs
Bruning, D.H. **81**, 50
- Infrared Spectroscopy with a Balloon-borne Michelson Interferometer. I. Instrumentation and Performance
Anderegg, M., Moorwood, A.F.M., Salinari, P., Furniss, I., Jennings, R.E., King, K.J., Towlson, W.A., Venis, T.E. **82**, 86
- On the Reduction of Three Dimensional Interferometer Measurements
Frater, R.H., Docherty, I.S. **84**, 75
- Focal Grating Photometer for the Determination of the Difference of Magnitude in Double Stars
Platzek, R.P., Ferrer, O.E. **84**, 106
- Stellar Chopping Photometry in Auroral Regions
Myrabo, H.K. **84**, 297

- Effect of Building Design on Photographic Zenith Tube Observations
Rafferty, T.J. **86**, 262
- Analogue Method for the Study of Pivot Irregularities in Meridian Instruments
De Concini, C., Zanzu, T. **87**, 1
- The Bragg Reflection Integral for Potassium Acid Phthalate
Lewis, M., Maksym, P.A., Evans, K.D. **87**, 213
- An Imaging Gas Scintillation Counter for X-ray Astronomy
Davelaar, J., Manzo, G., Peacock, A., Taylor, B.G., Andresen, R.D., Bleeker, J.A.M. **87**, 276
- Investigation of Diameter Corrections of the Brorfelde Transit Circle
Fabricius, C., Helmer, L., Fogh Olsen, H.J. **89**, 57
- Spectroscopic Observations of Galactic Nebulae and Galaxies with the Imaging Photon Counting System (IPCS)
Hua, C.T., Donas, J., Doan, N.H. **90**, 8
- Hartmann Tests on Large Telescopes Carried Out with a Small Screen in a Pupil Image
Loibl, B. **91**, 265
- A High-accuracy Optical Polarization Analyzer
Semel, M. **91**, 369
- On the Linearity of Electronography
Jeffers, S. **92**, 196
- Mesures de stabilité de piliers par clinométrie au CERGA
Laclare, F., Cormier, P. **95**, 395; **43**, 247
- Determination of Division Corrections
Benevides-Soares, P., Boczek, R. **96**, 127
- Erratum: The Bragg Reflection Integral for Potassium Acid Phthalate
Lewis, M., Maksym, P.A., Evans, K.D. **97**, 218
- A Very-wide-field, High Luminosity, and High Spectral Resolution Camera for the Observation of the Diffuse, Ionized Component of the Galactic Interstellar Medium
Courtès, G., Sivan, J.P., Saisse, M. **97**, 334
- Optical Design with Aspherical Gratings: the Example of the UV-PRIM Spectrograph
Lemaître, G. **103**, L14
- A Method for Searching for Optical Pulsars
Elsworth, Y.P., James, J.F. **103**, 131
- Practical Experience with Dichroic Beamsplitters for Visible Wavelengths
Velt, C.F., Tinbergen, J. **103**, 422
- On the Setting Errors of the Angle Standard of the Circumzenithal Instrument and of the Astrolabe
Niemi, A. **104**, 276
- The Short Term Stability of the Brorfelde Transit Circle
Fabricius, C. **105**, 413
- Comments on Determination of Division Corrections
Branham, L., Jr. **108**, L5
- Properties and Performance of the MPI Balloon Borne Compton Telescope
Schönfelder, V., Graser, U., Diehl, R. **110**, 138
- Experiences with the U.S. Naval Observatory Glass Circles
Rafferty, T.J., Klock, B.L. **114**, 95
- A Stable Acousto-optical Spectrometer for Millimeter Radio Astronomy
Masson, C.R. **114**, 270
- Magnetic Field in Solar Prominences Measured with a New Spectrally Scanning Magnetograph
Kim, I.S., Koutchmy, S., Nikolsky, G.M., Stellmacher, G. **114**, 347
- Effect of Different Sources of Variation of Latitude Data on Meridian Circle Catalogues
Rafferty, T.J. **114**, 420; **50**, 27
- An Accurate Derivation of the Division Corrections in a Photoelectric Meridian Circle
Miyamoto, M., Kühne, C. **115**, 216; **50**, 173
- Inventory of Major Operational and Planned Ground-based Astronomical Telescopes of the Countries Represented in the European Science Foundation (Second Edition, 1982)
European Science Foundation **115**, 216; **50**, 187
- A study of a correlation tracking method to improve imaging quality of ground-based solar telescopes
von der Lüh, O. **119**, 85
- Performance of Si: Ga infrared detectors under reduced background fluxes
Wolf, J., Lemke, D. **119**, 294
- Gamma-ray imaging with a rotating modulator
Durouchoux, P., Hudson, H., Hurford, G., Hurley, K., Materson, J., Orsal, E. **120**, 150
- Star transits with a photoelectric micrometer applied to the transit instrument of Torino Observatory
Anderlucci, E., Chiumiento, G., Fracastoro, M.G., Iervolino, R. **121**, 142
- A new automatic meridian circle PMC 190
Kühne, C. **121**, 165
- Meridian observations made with the Carlsberg Automatic Meridian Circle at Brorfelde (Copenhagen University Observatory) 1981-1982
Helmer, L., Fabricius, C., Einicke, O.H., Thoburn, C. **125**, 176; **53**, 223
- ### Interacting Galaxies
- The Kinematics and Distribution of Neutral Hydrogen in the Interacting Galaxy Pair NGC 4038/39
van der Hulst, J.M. **71**, 131
- Tidal Interaction within NGC 520
Barbieri, C., Tullio, G. **74**, 110
- Structure of a Southern Galaxy
Dennefeld, M., Laustsen, S., Materne, J. **74**, 123
- H I Observations of Active and Interacting Galaxies
Biermann, P., Clarke, J.N., Fricke, K.J. **75**, 19
- The Structure and Kinematics of the Neutral Hydrogen Bridge between M 81 and NGC 3077
Hulst, J.M. van der **75**, 97
- An Optical and H I Study of the Interacting Galaxies NGC 1512 and 1510
Hawarden, T.G., van Woerden, H., Mebold, U., Goss, W.M., Peterson, B.A. **76**, 230
- Investigation of Galaxies from Vorontsov-Vel'yaminov's Second Atlas
Barbieri, C., Casini, C., Heidmann, J., di Serego, S., Zambon, M. **76**, 370; **37**, 559
- NGC 6052: A Collision of Two Late Spirals?
Alloin, D., Duflot, R. **78**, L5
- The Peculiar Scd Galaxy NGC 5474: The Distribution and Kinematics of the Neutral Hydrogen
van der Hulst, J.M., Huchtmeier, W.K. **78**, 82
- NGC 6872: A Remarkable Barred Spiral
Block, D.L. **79**, L22
- Radio Continuum and H I Observations of the Interacting Galaxies NGC 4490/85
Viallefond, F., Allen, R.J., de Boer, J.A. **82**, 207

- Neutral Hydrogen Observations and Computer Modelling of the Interacting Galaxies NGC 672-IC 1727
Combes, F., Foy, F.C., Gottesman, S.T., Weliachew, L. **84**, 85
- On the Nature of VV 493 = UGC 07910
Sulentic, J.W. **88**, 94
- The Group of Galaxies NGC 2805-2814-2820-Markarian 108
Bosma, A., Casini, C., Heidmann, J., van der Hulst, J.M., van Woerden, H. **89**, 345
- Radial Velocities of Some Interacting Galaxies
Afanasyev, V.L., Karachentsev, I.D., Arkhipova, V.P., Dostal, V.A., Metlov, V.G. **91**, 302
- ESO 255-IG 07, a Compact Group of Interacting Galaxies
Bergvall, N., Ekman, A., Lauberts, A. **95**, 266
- Morphology and Spectral Properties of Seven Blue Systems of Interacting Galaxies
Bergvall, N. **97**, 302
- Interactions in Two Contrasting Examples of Galactic Groups
Danks, A.C., Alcaïno, G. **98**, 223
- Étude photométrique et cinématique du système double NGC 4485-4490
Duval, M.F. **98**, 352
- Spectroscopic and Photometric Observations of Galaxies from the ESO/Uppsala List. Third Catalogue
West, R.M., Surdej, J., Schuster, H.-E., Muller, A.B., Laustsen, S., Borchkhadze, T.M. **103**, 208; **46**, 57
- The Very Large, Interacting Galaxy Pair IC 5174/75
West, R.M., Barbier, R. **106**, 53
- Rotation and Mass of NGC 672 and IC 1727 (Text in French)
Carozzi-Meyssonier, N. **106**, 379; **47**, 237
- NGC 6240: A unique interacting galaxy
Fried, J.W., Schulz, H. **118**, 166
- Observations of the interacting galaxy pair NGC 4490/85
Klein, U. **121**, 150
- Neutral hydrogen observations of double spiral galaxies. II. NGC 3958/3963, NGC 5289/5290, NGC 5673/IC 1029, NGC 5107/5112
van Moorsel, G.A. **125**, 176; **53**, 271
- Poor evidence of merging in loose galaxy groups
Mardirosian, F., Giuricin, G., Mezzetti, M. **126**, 86
- Interferometry**, see Double Stars, Speckle Interferometry, Very Long Base Line Interferometry
- Infrared Spectroscopy with a Balloon Borne Michelson Interferometer. II. Observation of O III, O I, and N III Fine Structure Lines in H II Regions
Moorwood, A.F.M., Salinari, P., Furniss, I., Jennings, R.E., King, K.J. **90**, 304
- On the Recovery of Images from Incomplete Interferometric Measurements
Baker, P.L. **94**, 85
- Some Effects Produced by the Ionosphere on Radio Interferometry: Fluctuations in Apparent Source Position and Image Distortion
Bougeret, J.L. **96**, 259
- A Digital Spectrometer for the Westerbork Synthesis Radio Telescope
Bos, A., Raimond, E., van Someren Greve, H.W. **98**, 251
- Study of Stellar Polarization with the CERGA Interferometer
Vakili, F. **101**, 352
- Stellar Diameter Measurements by Two-telescope Interferometry in Optical Wavelengths
Bonneau, D., Koehlin, L., Oneto, J.L., Vakili, F. **103**, 28
- Detection of a 192 s Oscillatory Component on the Sun at 8.6 mm Wavelength
Bocchia, R. **106**, 79
- Radio Imaging of Solar Flares Using the Very Large Array: New Insights into Flare Process
Kundu, M.R., Schmahl, E.J., Velusamy, T., Vlahos, L. **108**, 188
- Interferometric Measurements of Stellar Positions in the Infrared
Sutton, E.C., Subramanian, S., Townes, C.H. **110**, 324
- Inventory of Major Operational and Planned Ground-based Astronomical Telescopes of the Countries Represented in the European Science Foundation (Second Edition, 1982)
European Science Foundation **115**, 216; **50**, 187
- Aperture synthesis observations of the 21 cm Zeeman effect
Bregman, J.D., Troland, T.H., Forster, J.R., Schwarz, U.J., Goss, W.M., Heiles, C. **118**, 157
- Reconstruction of a polarized brightness distribution by the maximum entropy method
Nityananda, R., Narayan, R. **118**, 194
- Stellar interferometry: diameters and effective temperatures of five giant stars (Text in French)
Faucherre, M., Bonneau, D., Koehlin, L., Vakili, F. **120**, 263
- The influence of ionospheric refraction on radio astronomy interferometry
Spoelstra, T.A.T. **120**, 313
- A method of stabilizing the clean algorithm
Cornwell, T.J. **121**, 281
- The spatial power spectrum of galactic neutral hydrogen from observations of the 21-cm emission line
Crovisier, J., Dickey, J.M. **122**, 282
- One-dimensional high time resolution solar observations with the Westerbork Synthesis Radio Telescope
Kattenberg, A., Palagi, F. **125**, 1
- Intergalactic Matter**
- Extended Envelope of Neutral Hydrogen around M 101
Huchtmeier, W.K., Witzel, A. **74**, 138
- H I Observations of SO Galaxies
Biermann, P., Clarke, J.N., Fricke, K.J. **75**, 7
- Improved Limits on Intergalactic Intracluster H I in the Coma Cluster
Tarter, J.C., Wright, M.C.H. **76**, 127
- The "Papillon" Radio Galaxy IC 708
Vallée, J.P., Wilson, A.S., Van der Laan, H. **77**, 183
- Visibility of Pregalactic Fluctuations and an Upper Limit on q_0
Bode, M.F., Evans, A. **78**, 78
- Evidence of an Intra Cluster Medium in the Hercules Supercluster
Valentijn, E.A. **78**, 362
- On the Extragalactic Nature of the Far-ultraviolet Background
Jakobsen, P. **81**, 66
- Photometry (VBLUW System) of 26 RR Lyrae Variables in the Direction of a Proposed Intergalactic Dust Cloud in Microscopium
van Genderen, A.M., Block, D.L. **82**, 394; **39**, 199
- Multifrequency Observations of Very Large Radio Galaxies. II. 3C236
Strom, R.G., Willis, A.G. **85**, 36
- On the Origin of the Intergalactic Magnetic Field and of the Radio Halo Associated with the Coma Cluster of Galaxies
Roland, J. **93**, 407
- Superclusters and Lyman α Absorption Lines in Quasars
Oort, J.H. **94**, 359
- Thermal Evolution of a Contracting Hydrogen Gas Cloud
Hasegawa, T., Yoshii, Y., Sabano, Y. **98**, 186

New Models for the Intracluster Gas

Cavaliere, A., Fusco-Femiano, R. **100**, 194

Erratum: On the Origin of the Inter Galactic Magnetic Field and the Radio Halo Associated with the Coma Cluster of Galaxies

Roland, J. **102**, 142

A Possible Large-scale Anisotropy of the Universe

Fliche, H.H., Souriau, J.M., Triay, R. **108**, 256

H I-Observations of Galaxies in the Pegasus I Cluster

Richter, O.-G., Huchtmeier, W.K. **109**, 155

Gas Dynamics of Flow Past Galaxies

Shaviv, G., Salpeter E.E. **110**, 300

Radio and X-ray Observations of the Abell 2241 Galaxy Clusters

Bijleveld, W., Valentijn, E.A. **111**, 50

How Well is Gas Mixed in Clusters of Galaxies?

Nepveu, M. **114**, 337

A search for microwave background diminution towards the cluster 0016+16

Andernach, H., Schallwisch, D., Sholomitski, G.B., Wielebinski, R. **124**, 326

An upper limit to the deuterium abundance in a few halo dwarfs

Spite, M., Maillard, J.-P., Spite, F. **128**, 252

Interiors, see Stellar Evolution, Stellar Structure

Interplanetary Dust, see also Interplanetary Matter, Zodiacal Light

Comet West 1975 n. Part II. Study of the Striated Tail

Lamy, P.L., Koutchmy, S. **72**, 50

The Plane of Symmetry of Interplanetary Dust in the Inner Solar System

Leinert, C., Hanner, M., Richter, I., Pitz, E. **82**, 328

Numerical Simulation of Poynting-Robertson and Collisional Effects in the Interplanetary Dust Cloud

Trulsen, J., Wikan, A. **91**, 155

On the Electrostatic Potential of Interplanetary Grains: Influence of the Thermoionic Effect

Millet, J., Lafon, J.P.L., Lamy, Ph.L. **92**, 6

On the Electrostatic Potential and Charge of Cosmic Grains. I. Theoretical Background and Preliminary Results

Lafon, J.-P.J., Lamy, Ph.L., Millet, J. **95**, 295

Interaction of Grains with the Solar Energetic Particles

Mukai, T., Schwehm, G. **95**, 373

On the Charge Distribution of Interplanetary Grains

Mukai, T. **99**, 1

Plasma - Dust Interactions in the Solar Vicinity and their Observational Consequences

Fahr, H.J., Ripken, H.W., Lay, G. **102**, 359

"Flip-flop" of Electric Potential of Dust Grains in Space

Meyer-Vernet, N. **105**, 98

High Energy Gamma Rays from Cosmic Ray Nucleons

Schlickeiser, R. **106**, L5

Solar Wind Pressure on Interplanetary Dust

Mukai, T., Yamamoto, T. **107**, 97

Stability of the Zodiacal Light from Minimum to Maximum of the Solar Cycle (1974-1981)

Leinert, C., Richter, I., Planck, B. **110**, 111

Search for Short Term Variations of Zodiacal Light and Optical Detection of Interplanetary Plasma Clouds

Richter, I., Leinert, C., Planck, B. **110**, 115

Diffusion of Keplerian Motions by a Stochastic Force. II. Lorentz Scattering of Interplanetary Dust

Barge, P., Pellat, R., Millet, J. **115**, 8

A Scattering Model for the Zodiacal Light Particles

Schiffer, R., Thielheim, K.O. **116**, 1

Optical properties of interplanetary dust: comparison with light scattering by larger meteoritic and terrestrial grains

Weiss-Wrana, K. **126**, 240

Interplanetary Matter, see also Interplanetary Dust, Solar Wind, Zodiacal Light

Four UV Observations of the Interstellar Wind by Mariner 10: Analysis with Spherically Symmetric Solar Radiation Models

Ajello, J.M., Witt, N., Blum, P.W. **73**, 260

Dynamical Effects in Resonant Scattering by Interplanetary Helium

Wallis, M.K., Wallis, J. **78**, 41

Polar Solar Wind and Interstellar Wind Properties from Interplanetary Lyman- α Radiation Measurements

Witt, N., Ajello, J.M., Blum, P.W. **95**, 80

Absorption Feature Observed on the H Lyman-alpha Solar Line: an Interpretation

Artzner, G., Cazes, S., Emerich, C., Vial, J.C., Lemaire, P. **100**, 205

How to maintain the spatial distribution of interplanetary dust

Leinert, C., Röser, S., Buitrago, J. **118**, 345

Electrodynamics of submicron dust in the cometary coma

Wallis, M.K., Hassan, M.H.A. **121**, 10

Modification of the local interstellar gas properties in the heliospheric interface

Ripken, H.W., Fahr, H.J. **122**, 181

The velocity and the density spectrum of the solar wind from simultaneous three-frequency IPS observations

Scott, S.L., Rickett, B.J., Armstrong, J.W. **123**, 191

Solar wind observations near the Sun using interplanetary scintillation

Scott, S.L., Coles, W.A., Bourgois, G. **123**, 207

Interplanetary Space

Observations of Interstellar Helium with a Gas Absorption Cell: Implications for the Structure of the Local Interstellar Medium

Freeman, J., Paresce, F., Bowyer, S., Lampton, M. **83**, 58

Interstellar Absorption and Extinction

Plasma effects on Doppler measurements of interplanetary spacecraft. I. Discontinuities and waves

Iess, L., Dobrowolny, M., Bertotti, B. **121**, 203

Interstellar Reddening in Clouds in the Solar Vicinity. Statistically Derived from Color Excesses of A and F Stars Confined to 63 Selected Areas

Knude, J. **71**, 344

Anomalous Extinction and Gould's Belt

Whittet, D.C.B. **72**, 370

An Investigation of the Interstellar Extinction in 11 Selected Directions on the Carina-Crux-Centaurus Region of the Milky Way

Sundman, A. **72**, 379; **35**, 327

Polarization Measurements and Extinction near the North Galactic Pole

Markkanen, T. **74**, 201

Balmer Line Photometry of the 30 Doradus Nebula

Strauss, F.M., Braz, M.A., Ducati, J.R. **74**, 280

Formaldehyde Absorption and Visual Extinction in Several Dark Clouds near NGC 2264

Minn, Y.K., Greenberg, J.M. **77**, 37

Interstellar Reddening and Intercloud Density in the Solar Vicinity

Knude, J. **77**, 198

- Optical Extinction and Surface Brightness Observations of the Dark Nebulae Lynds 134 and Lynds 1778/1780
Mattila, K. **78**, 253
- Interstellar Absorption of the Extreme Ultraviolet Flux from Two Hot White Dwarfs
Cash, W., Bowyer, S., Lampton, M. **80**, 67
- The Absolute Magnitude and the Type Classification of CN 1181=3 C 58
Panagia, N., Weiler, K.W. **82**, 389
- Photometry (VBLUW System) of 26 RR Lyrae Variables in the Direction of a Proposed Intergalactic Dust Cloud in Microscopium
van Genderen, A.M., Block, D.L. **82**, 394; **39**, 199
- Interstellar Reddening in the Solar Neighbourhood
Spaenhauer, A.M. **83**, 234
- The Reddening Law and Dust Content in Nearby Extragalactic Systems
Isserstedt, J. **83**, 317
- The Ratio between Total and Selective Absorption in the Small Magellanic Cloud
Isserstedt, J. **83**, 322
- The Diffuse Interstellar Line at 6284 Å
Schmidt-Kaler, Th., Tüg, H., Buchholz, M., Schlosser, W. **83**, 383; **39**, 305
- The 4430 Å Interstellar Absorption Band in the Spectra of LMC Supergiants
Houziaux, L., Nandy, K., Morgan, D.H. **84**, 377
- Anomalous Strength of the 2200 Å Feature in Cassiopeia-Taurus Association
Morales, C., Llorente de Andrés, F., Ruiz del Arbol, J.A. **85**, 302
- Colour Excess and Stellar Distribution in Five Selected Directions of the Milky Way in Carina, Crux, Centaurus and Norma
Johansson, K.L.V. **87**, 253; **41**, 43
- Studies of the Carina Nebula. II. The Extinction Law in the Direction of 14 O-type Stars
Thé, P.S., Bakker, R., Tjin A Djie, H.R.E. **89**, 209
- Ultraviolet Studies of the Magellanic Clouds. II. Internal Extinction, Formation of Massive Stars, Comparison with Other Galaxies
Vangioni-Flam, E., Lequeux, J., Maucherat-Joubert, M., Rocca-Volmerange, B. **90**, 73
- The Interstellar Reddening Law in the Visible
Lucke, P.B. **90**, 350
- On the Variation of the Colour Excess in the Carina-Crux-Centaurus-Norma Region of the Milky Way
Lodén, L.O., Sundman, A. **91**, 59
- Multicolour UBVR Photometry of Stars in M 17
Chini, R., Elsässer, H., Neckel, Th. **91**, 186
- Interstellar Reddening Towards the South Galactic Pole
Albrecht, R., Maitzen, H.M. **91**, 261; **42**, 9
- Studies of Ultraviolet Interstellar Extinction with the Sky-survey Telescope of the TD-1 Satellite. Results for Different OB-Associations
Morales, C., Llorente de Andrés, F., Ruiz del Arbol, J.A., Pérez Mollá, J. **91**, 379; **42**, 155
- The Spatial Distribution of the Interstellar Extinction
Neckel, Th., Klare, G. **91**, 381; **42**, 251
- Infrared Spectra of Hydrated Silicates, Carbonaceous Chondrites, and Amorphous Carbonates Compared with Interstellar Dust Absorptions
Knacke, R.F., Krätschmer, W. **92**, 281
- UBV Sequences in Three Northern Milky Way Regions and a Comment on the Interstellar Extinction Around $l=90^\circ$
Lindgren, H., Bern, K. **92**, 324; **42**, 335
- The Diffuse Interstellar Line at 4430 Å
Tüg, H., Schmidt-Kaler, Th. **94**, 16
- A Study of Early-Type Stars in a Perseus Arm Area
Wramdemark, S. **95**, 210; **43**, 103
- C II Two-electron Transitions
Nussbaumer, H., Storey, P.J. **96**, 71
- The Distribution of OH, CH and Extinction in L 1642
Sandell, G., Johansson, L.E.B., Nguyen-Q-Rieu, Mattila, K. **97**, 317
- Latitudinal Anisotropy of the Solar Far Ultraviolet Flux: Effect on the $L\alpha$ Sky Background
Cook, J.W., Meier, R.R., Brueckner, G.E., Van Hoosier, M.E. **97**, 394
- Diffuse Interstellar Clouds. Detectability Distribution of Diameters and Column Densities
Knude, J. **98**, 74
- Interplanetary Scintillation and Jovian DAM Emission
Genova, F., Leblanc, Y. **98**, 133
- A Study of Galactic Absorption as Revealed by the Reddenings of Quasars
Teerikorpi, P. **98**, 300
- On the Hubble Diagram for Quasars as Corrected for Galactic Absorption: Evidence for a Separate Class of the Most Luminous Quasars
Teerikorpi, P. **98**, 309
- Ultraviolet Extinction in the Small Magellanic Cloud
Rocca-Volmerange, B., Prévot, L., Ferlet, R., Lequeux, J., Prévot-Burnichon, M.L. **99**, L5
- Multicolour Photometry of Stars in the Ophiuchus Dark Cloud Region
Chini, R. **99**, 346
- On the Ultraviolet Extinction in the Galactic Plane
Kester, D. **99**, 375
- A Comparison of Visual Extinction with H_2CO and $H I$ Absorption in Heiles Cloud 2
Sherwood, W.A., Wilson, T.L. **101**, 72
- Statistics of Neutral Hydrogen Absorption Toward Pulsars
Dickey, J.M., Weisberg, J.M., Rankin, J.M., Boriakoff, V. **101**, 332
- The Interstellar Extinction Law in Some Dusty $H II$ Regions
Neckel, Th., Chini, R. **102**, 281; **45**, 451
- RGU Photometry of a Field in the Large Sagittarius Cloud (Sgr III)
Topaktas, L. **103**, 209; **46**, 93
- A Survey of the $H I$ Self-absorption in the ρ Ophiuchi Region
Minn, Y.K. **103**, 269
- Star Formation and Extinction in Extragalactic $H II$ Regions
Lequeux, J., Maucherat-Joubert, M., Deharveng, J.M., Kunth, D. **103**, 305
- An Attempt to Determine the Solar $Ly \alpha$ Flux Independently of Instrument Calibration
Cazes, S., Emerich, C., Vidal-Madjar, A., Meier, R.R. **104**, 10
- The Lick Galaxy Counts, the Local Interstellar Absorption and Molecular Hydrogen
Strong, A.W., Lebrun, F. **105**, 159
- Optical Study of the W 51 Complex
Goudis, C., Hippelein, H. **105**, 329
- Space Density of Stars and Interstellar Extinction near h and χ Persei (Perseus I)
Becker, W., Wooden II, W.H. **106**, 179; **46**, 347

The Correlation Between Diffuse Far Ultraviolet Background and Line of Sight Hydrogen Column: Dust Scattering and H_2 Fluorescence

Jakobsen, P. **106**, 375

Geneva Photometric Boxes. II. The Reddening Towards the Galactic Poles

Nicolet, B. **106**, 378; **47**, 199

The Gas to Dust Ratio and the Near-infrared Extinction Law in the Large Magellanic Cloud

Koornneef, J. **107**, 247

COS-B Gamma-ray Measurements, Cosmic Rays and the Local Interstellar Medium

Lebrun, F., Bignami, G.F., Buccheri, R., Caraveo, P.A., Hermsen, W., Kanbach, G., Mayer-Hasselwander, H.A., Paul, J.A., Strong, A.W., Wills, R.D. **107**, 390

RGU Three Colour Photometry of a Field in Centaurus

Spaenhauer, A., Fang, Ch. **107**, 412; **47**, 441

On the Infrared Sources 1 and 2 in NGC 7538

Elsässer, H., Birkle, K., Eiroa, C., Lenzen, R. **108**, 274

Three-colour Photometry of a Field in the Galactic Anticentre Section Near NGC 2360

Morales Durán, C. **108**, 416; **48**, 139

Open Clusters in Our Galaxy

Lynga, G. **109**, 213

The Graphite Rich Cepheus OB 3 Association

Barsella, B., Panagia, N., Perinotto, M. **111**, 130

Reddening Relations of the VBLUW and UVV Systems for Objects with Emission Line Spectra

Greve, A., van Genderen, A.M. **111**, 185

Three-colour Photometry of a Field near the Galactic Centre (SA 133 F)

Becker, W., Fang, Ch. **111**, 209; **49**, 61

High Angular Resolution uvby β Observations of Stars Earlier than GO in the Intermediate and Low Latitude Areas SA 128 and SA 156

Knude, J. **111**, 210; **49**, 69

NGC 2440: Ionization Structure, Extinction, and Near Infrared Spectrum

Condal, A.R. **112**, 124

RGU-photometry of the Field Vela II

Becker, W., Marsoglu, A. **112**, 133

A Photoelectric UVB Sequence in a Low Extinction Puppis Field

Reed, B.C., FitzGerald, M.P. **112**, 179; **49**, 521

A Spectrophotometric Study of Kepler Supernova Remnant

Dennefeld, M. **112**, 215

Sk 143: An SMC Star with a Galactic-type Ultraviolet Interstellar Extinction

Lequeux, J., Maurice, E., Prévot-Burnichon, M.-L., Prévot, L., Rocca-Volmerange, B. **113**, L15

On the Properties of the Circumstellar Matter Around the Bright Young Variable Shell Star HR 5999

Andersen, J., Gahm, G.F., Krelowski, J. **113**, 176

The Two-colour Diagram of Luminous Stars in the Magellanic Clouds (Text in German)

Isserstedt, J. **115**, 97

The Law of Interstellar Absorption in the Wave-number Interval $0.95 \mu^{-1}$ to $3.03 \mu^{-1}$

Ardeberg, A., Virdefors, B. **115**, 347

The Unprecedented Light Variations of NGC 2346

Méndez, R.H., Gathier, R., Niemela, V.S. **116**, L5

On the photometric differences between luminous OBA type stars in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 53

The three micron "ice" band in grain mantles

Hagen, W., Tielens, A.G.G.M., Greenberg, J.M. **117**, 132

Properties of amorphous H_2O ice and origin of the $3.1 \mu m$ absorption

Léger, A., Gauthier, S., Défourneau, D., Rouan, D. **117**, 164

Abnormal extinction and dust properties in M 16, M 17, NGC 6357 and the Ophiuchus dark cloud

Chini, R., Krügel, E. **117**, 289

Erratum: On the photometric differences between luminous OBA type stars in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 368

A discussion on the reddening of long period Cepheids in the Magellanic Clouds

van Genderen, A.M. **119**, 192

A laboratory study of the infrared spectra of interstellar ices

Hagen, W., Tielens, A.G.G.M., Greenberg, J.M. **119**, 324; **51**, 389

The compact H II region S235A. Observations and interpretation

Olofsson, G. **120**, 1

A high-latitude H I-cloud with optical emission

Goerigk, W., Mebold, U., Reif, K., Kalberla, P.M.W., Velden, L. **120**, 63

Magnetic alignment of interstellar dust grains for dominating magnetic effects

Cugnon, P. **120**, 156

The ultraviolet reddening of Be stars

Schild, R. **120**, 223

A search for optical polarization of the Milky Way at $l = 150^\circ$ and $l = 223^\circ$

Leinert, C., Richter, I. **121**, 146

New polarization measurements of HD 183143, HD 204827, and Cyg OB 2 Sch. No. 12

Schulz, A., Lenzen, R. **121**, 158

Status of laboratory experiments on ice mixtures and on the $12 \mu m$ H_2O ice feature

Kitta, K., Krätschmer, W. **122**, 105

Intrinsic UV colour indices of early-type stars

Galecki, Z., Graczyk, M., Janaszak, E., Kolos, R., Krelowski, J., Strobel, A. **122**, 207

Photometric boxes in the four-color system

Philip, A.G.D., Egret, D. **123**, 39

Observations of an emission nebula associated with the carbon star UV Aur

Reimers, D., Groote, D. **123**, 257

Studies of the Carina Nebula. V. The near infrared excess of O-type stars and the anomalous extinction law in their environment

Thé, P.S., Groot, M. **125**, 75

A comparison of high resolution optical and radio observations of W 3

Dickel, H.R., Harten, R.H., Gull, T.R. **125**, 320

VLA synthesis of H I absorption toward Sgr A

Liszt, H.S., van der Hulst, J.M., Burton, W.B., Ondrechen, M.P. **126**, 341

A comparison of UV extinction in Sco OB2 and Per OB1 associations

Krelowski, J., Strobel, A. **127**, 271

The Herbig Ae star AB Aur: absorption along the line of sight and chromospheric emission

Felenbok, P., Praderie, F., Talavera, A. **128**, 74

- Interstellar Clouds**, see also Dust, Interstellar Absorption and Extinction, Radio Frequency Lines: Molecular Lines
- Scattering from a Cylindrical Dust Cloud in an Isotropic Radiation Field
Brand, P.W.J.L. **71**, 47
- CO Isotope Mapping of L 134 N
Caldwell, J.A.R. **71**, 255
- Accretion from Interstellar Clouds and White Dwarf Spectral Evolution
Wesemael, F. **72**, 104
- A Monte Carlo Approach to Non-LTE Radiation Transfer Problems
Bernes, C. **73**, 67
- Chemical and Thermal Equilibrium in Dark Clouds. II. Importance of Grain Surface Reactions for Molecular Formation
Viala, Y.P., Bel, N., Clavel, J. **73**, 174
- The Stability of Magnetic Interstellar Clouds
Garlick, A.R. **73**, 337
- Observations of New Far Infrared Sources in the Cepheus OB3 Molecular Cloud
Koppelaar, K., Sargent, A.I., Nordh, L., Duinen, R.J. van, Aalders, J.W.G. **75**, L1
- On the Magnetic Field in Interstellar Molecular Clouds
Baker, P.L. **75**, 54
- The Effect of Cosmic Ray Screening upon the Stability of Interstellar Clouds
Hartquist, T.W., Oppenheimer, M., Elmegreen, B. **75**, 137
- High Resolution Radio Observations of Bright Rims in IC 1396
Matthews, H.E. **75**, 345
- Studies of Ionized Carbon Regions in Dark Clouds
van Gorkom, J.H., Shaver, P.A., Goss, W.M. **76**, 1
- A Comparison of High Resolution Radio and Far-infrared Maps of M 17
Wilson, T.L., Fazio, G.G., Jaffe, D., Kleinmann, D., Wright, E.L., Low, F.J. **76**, 86
- The Breakdown in Kinetic Energy Equipartition in Colliding Systems with Fragmentation
Handbury, M.J., Simons, S., Williams, I.P. **77**, 152
- Instabilities in Molecular Hydrogen Clouds
Giaretta, D.L. **78**, 328
- Visual Extinction (Av) in the Direction of the North America Dust Cloud
Goudis, C., White, N.J. **78**, 373
- A Model of a Dust Cloud Heated by a Set of Embedded Stars
Rouan, D. **79**, 102
- Relations between Galaxy Counts and H I Column Densities: An Interpretation of the Latitude Dependence Effect
Lebrun, F. **79**, 153
- The 3.1 μ m Absorption in Molecular Clouds is Probably Due to Amorphous H₂O Ice
Léger, A., Klein, J., de Cheveigne, S., Guinet, C., Defourneau, D., Belin, M. **79**, 256
- A Catalogue of Low Mass Clouds in the Solar Vicinity, Results from a Photometric Survey of 84 Volumes
Knude, J. **80**, 331; **38**, 407
- A Study of Stars in Southern Dust Clouds with Bright Nebulosities
Gahm, G.F., Malmort, A.M. **82**, 295
- Atomic Hydrogen in a Field in Cygnus X Containing the Supernova Remnant G 78.2+2.1
Landecker, T.L., Roger, R.S., Higgs, L.A. **82**, 393; **39**, 133
- Heavy Obscuration in the Direction of W 3/W 4/W 5
Goudis, C., White, N.J. **83**, 79
- Fragmentation of Interstellar Clouds: Three-dimensional Hydrodynamical Calculations
Różyczka, M., Tscharnuter, W.M., Winkler, K.-H., Yorke, H.W. **83**, 118
- Far Infrared Study of Molecular Clouds: Dust Temperature Profiles in S 140, IC 1396, RCrA
de Muizon, M., Rouan, D., Léna, P., Nicollier, C., Wijnbergen, J. **83**, 140
- CH Observations of Three Bright Rimmed Molecular Clouds
Sandell, G., Höglund, B., Friberg, P. **83**, 226
- Distribution of Stars and Interstellar Dust Along the Inner Side of the Carina Spiral Feature
Ardeberg, A., Maurice, E. **83**, 383; **39**, 325
- Collisions Between Grains in a Turbulent Gas
Völk, H.J., Jones, F.C., Morfill, G.E., Röser, S. **85**, 316
- On the Nature of the COS-B Gamma-ray Source CG 353+16
Bignami, G.F., Morfill, G.E. **87**, 85
- Iron Hydrides Formation in Interstellar Clouds
Bar-Nun, A., Pasternak, M., Barrett, P.H. **87**, 328
- Ammonia and Cyanoacetylene Observations of the High Density Core of L 183 (L 134 N)
Ungerechts, H., Walmsley, C.M., Winnewisser, G. **88**, 259
- An Exceptional Cold Diffuse Cloud
Crovisier, J., Kazès, I. **88**, 329
- The Effect of Turbulent Viscosity on Stability- and Collapse of a Rotating Protostellar Cloud
Regev, O., Shaviv, G. **89**, 61
- Modeling of Diffuse Interstellar Clouds: the Case of Gamma Arae
Federman, S.R., Glassgold, A.E. **89**, 113
- Formaldehyde as a Probe of Dark Clouds
Sandqvist, A., Bernes, C. **89**, 187
- Structure of Molecular Clouds. II. Clouds without Prominent Star Formation
Stenholm, L.G. **89**, 264
- H II Bubbles and Disruption of Molecular Clouds
Mazurek, T.J. **90**, 65
- On the Motion and Destruction of Grains in Interstellar Clouds
Havnes, O. **90**, 106
- Structure of Molecular Clouds. III. Effects of MHD Waves in Collapsing Fragments
Morfill, G.E., Stenholm, L.G. **90**, 134
- A Study of Cold Hydrogen in the Dark Cloud Lynds 134
Winnberg, A., Grasshoff, M., Goss, W.M., Sancisi, R. **90**, 176
- Hydrostatic Models of Molecular Clouds. I. Steady State Models
de Jong, T., Dalgarno, A., Boland, W. **91**, 68
- The Area Around the Orion Nebula Observed in the CO ($J=1-0$) Transition
Gillespie, A.R., White, G.J. **91**, 257
- Structure of Molecular Clouds: I. Observational Constraints and CO Line Formation
Stenholm, L.G. **91**, 261; **42**, 23
- Interpretation of OH Main Line Anomalies in Interstellar Clouds
Bujarrabal, V., Nguyen-Q-Rieu **91**, 283
- A Model for the H I Cloud Spectrum in the Solar Neighbourhood
Chièze, J.-P., Lazareff, B. **91**, 290
- Structure of Molecular Clouds. IV. Clouds with Prominent Star Formation
Stenholm, L.G. **92**, 142
- Intermediate Velocity Clouds in the Region of the South Celestial Pole
Morris, R. **92**, 315

- Statistical Properties of Interstellar Neutral Hydrogen from 21-cm Absorption Surveys
Crovisier, J. **94**, 162
- The Collision of Clouds with a Galactic Disk
Tenorio-Tagle, G. **94**, 338
- Far Infrared Observations of S 255 and S 187
Sargent, A.I., van Duinen, R.J., Nordh, H.L., Aalders, J.W.G. **94**, 377
- Partial Aperture Synthesis of Five Dark Clouds at 1.4 GHz
Falgarone, E., Gilmore, W. **95**, 32
- A Molecular Line Study of the Elongated Dark Dust Cloud TMC 1
Tölle, F., Ungerechts, H., Walmsley, C.M., Winnewisser, G., Churchwell, E. **95**, 143
- Neutral-hydrogen Emission Features in Scorpius and Ophiuchus and the Origin of SCO OB2
Olano, C.A., Pöppel, W.G.L. **95**, 316
- The OH⁺ Molecule in Interstellar Clouds Absolute Oscillator Strengths and Equivalent-widths for OH⁺ ($A^3\Pi^-X^3\Sigma^-$) Bands
de Almeida, A.A., Singh, P.D. **95**, 383
- An Analysis of Neutral Atomic Species Observed in Diffuse Interstellar Clouds
Federman, S.R. **96**, 198
- H I and Dust in Kutner's Cloud
Batra, W., Wilson, T.L., Rahe, J. **96**, 202
- Diffuse Interstellar Clouds. Number Density and Volume Filling Factor
Knude, J. **97**, 380
- Abundance of Interstellar Nitrogen
Ferlet, R. **98**, L1
- Diffuse Interstellar Clouds. Detectability Distribution of Diameters and Column Densities
Knude, J. **98**, 74
- Emission-absorption Observations of OH in Diffuse Interstellar Clouds
Dickey, J.M., Crovisier, J., Kazès, I. **98**, 271
- The Distribution of Early-type Stars and Dust Around $l = 114^\circ$
Wramdemark, S. **99**, 204; **44**, 115
- The Gasdynamics of H II Regions. V. The Interaction of Weak R Ionization Fronts with Dense Clouds
Tenorio-Tagle, G., Bedijn, P.J. **99**, 305
- Charge Exchange and Fine Structure Excitation in O-D⁺ Collisions
Roueff, E. **99**, 394
- Cyanopolyne Absorption in the Direction of Cassiopeia A
Bell, M.B., Feldman, P.A., Matthews, H.E. **101**, L13
- H I Fine Structure in a High Velocity Cloud (HVC A1)
Schwarz, U.J., Oort, J.H. **101**, 305
- Observations of CO in H I Clouds: Correlations with H I and OH
Kazès, I., Crovisier, J. **101**, 401
- A Survey of the H I Self-absorption in the ρ Ophiuchi Region
Minn, Y.K. **103**, 269
- On the Ice Content of the KL Nebula in Orion
Papoular, R. **104**, L1
- Observations of HCO⁺, H¹³CO⁺, ¹³CO and C¹⁸O in Taurus Cloudlets
Baudry, A., Cernicharo, J., Péroult, M., de la Noë, J., Despois, D. **104**, 101
- On the Angular Momentum of Colliding Interstellar Clouds
Horedt, G.P. **106**, 29
- Anomalous Motions of H I Clouds
Shaver, P.A., Radhakrishnan, V., Anantharamaiah, K.R., Retallack, D.S., Wamsteker, W., Danks, A.C. **106**, 105
- An Effelsberg-Green Bank Galactic H I Absorption Line Survey. I. The Observations
Mebold, U., Winnberg, A., Kalberla, P.M.K., Goss, W.M. **106**, 180; **46**, 389
- Westerbork Observations of H I Absorption in the Direction of Sgr A
Schwarz, U.J., Ekers, R.D., Goss, W.M. **110**, 100
- The Origin of the Infrared [C I] Emission: H II or H I Regions?
Cesarsky, D.A. **113**, L7
- An Effelsberg-Green Bank Galactic H I Absorption Line Survey. II. Results and Interpretation
Mebold, U., Winnberg, A., Kalberla, P.M.W., Goss, W.M. **115**, 223
- Westerbork H I observations of the H II region W3
Goss, W.M., Retallack, D.S., Felli, M., Shaver, P.A. **117**, 115
- Aperture synthesis observations of the 21 cm Zeeman effect
Bregman, J.D., Troland, T.H., Forster, J.R., Schwarz, U.J., Goss, W.M., Heiles, C. **118**, 157
- Six-centimeter H₂CO observations: envelopes of dark clouds
Vanden Bout, P.A., Snell, R.L., Wilson, T.L. **118**, 337
- Detection of large infrared polarization from L 1551 IRS 5
Nagata, T., Sato, S., Kobayashi, Y. **119**, L1
- A high-latitude H I-cloud with optical emission
Goerigk, W., Mebold, U., Reif, K., Kalberla, P.M.W., Velden, L. **120**, 63
- The Cygnus X region. XIII. The dark cloud between IC 1318b and c
Wendker, H.J., Schramm, K.J., Dieckvoss, C. **121**, 69
- Emission and absorption at 6 cm from excited OH associated with compact H II regions
Gardner, F.F., Martín-Pintado, J. **121**, 265
- The spatial power spectrum of galactic neutral hydrogen from observations of the 21-cm emission line
Crovisier, J., Dickey, J.M. **122**, 282
- The molecular cloud-H II region complexes associated with Sh 90 and Sh 235
Lafon, G., Deharveng, L., Baudry, A., de La Noë, J. **124**, 1
- Interstellar C₂ in the Ophiuchus clouds
Danks, A.C., Lambert, D.L. **124**, 188
- Tentative detection of the CS⁺ molecular ion in diffuse interstellar clouds
Ferlet, R., Roueff, E., Horani, M., Rostas, J. **125**, L5
- Detection of an extended soft X-ray source H 2326-79 in the southern sky
Agrawal, P.C., Riegler, G.R., Singh, K.P. **126**, 70
- The fraction of the sky screened by local diffuse dust clouds
Knude, J. **126**, 89
- VLA synthesis of H I absorption toward Sgr A
Liszt, H.S., van der Hulst, J.M., Burton, W.B., Ondrechen, M.P. **126**, 341
- Radio searches for additional interstellar molecules
Hollis, J.M., Suenram, R.D., Lovas, F.J., Snyder, L.E. **126**, 393
- Interstellar Matter**, see also Abundance, interstellar; H II Regions, Nebulae, OH Sources, Radio Frequency Lines
- Interferometric Observations of the Interstellar Mg I Line Structures of ζ Ori in the Balloon UV
Bates, B., Coll, R.F., Giaretta, D.L., McCartney, D.J., McKeith, C.D., McQuoid, J.A., Noble, S. McC. **71**, L22
- Interstellar Carbon I Lines in ζ Puppis and ζ Ophiuchi
de Boer, K.S., Morton, D.C. **71**, 141
- Population Ratios of Fine Structure Levels
Smeding, A.G., Pottasch, S.R. **71**, 274; **35**, 257

- Electron Collisional Excitation of Rotational Transitions in CH^+ and HeH^+
Flower, D.R. **73**, 237
- Dwarf-M Stars as a Source of He^3 in the Interstellar Medium
Shlosman, I., Kozlovsky, B.Z., Shaviv, G. **73**, 358
- Determination of Cooling Rates in the Interstellar Medium
Pottasch, S.R., Wesselius, P.R., Duinen, R.J. van **74**, L15
- Theoretical Evaluation of the Distribution of ^{13}C in Cyanoacetylene at Thermodynamic Equilibrium
Wolfsberg, M., Bopp, P., Heininger, K., Mallinson, P.D. **74**, 369
- Faint, Nebulous Filaments, 2000 pc Diameter, around the 30 Doradus Nebula
Meaburn, J. **75**, 127
- Far Infrared Diffuse Emission from the Galactic Plane. II. The Longitude Profile
Serra, G., Boissé, P., Gispert, R., Wijnbergen, J., Ryter, C., Puget, J.L. **76**, 259
- Interstellar Hydrogen Subject to a Net Repulsive Solar Force Field
Fahr, H.J. **77**, 101
- A Study of the Galactic Gas-to-dust Ratio from Observations of Globular Clusters
Mirabel, I.F., Gergely, T.E. **77**, 110
- Interstellar Reddening and Intercloud Density in the Solar Vicinity
Knude, J. **77**, 198
- Zodiacal Light and Local Interstellar Dust: Predictions for an Out-of-ecliptic Spacecraft
Giese, R.H. **77**, 223
- The Interaction of High-velocity Planetary Nebulae with the Interstellar Medium
Isaacman, R. **77**, 327
- Charge Exchange of N^{3+} Ions with Atomic Hydrogen in the Interstellar Gas
McCarroll, R., Valiron, P. **78**, 177
- On the Absorption of Solar $\text{L} \alpha$ by Hot Interstellar Hydrogen
Meier, R.R. **79**, 277
- Multiple Scattering of Solar Resonance Radiation in the Nearby Interstellar Medium. I
Keller, H.U., Thomas, G.E. **80**, 227
- Diffuse Gamma Rays and Galactic Hydrogen Distribution
Özel, M.E. **81**, 33
- Analytical Results for Interstellar Shocks
Elitzur, M. **81**, 351
- Observations of Interstellar Helium with a Gas Absorption Cell: Implications for the Structure of the Local Interstellar Medium
Freeman, J., Paresce, F., Bowyer, S., Lampton, M. **83**, 58
- Interstellar Reddening in the Solar Neighbourhood
Spaenhauer, A.M. **83**, 234
- Turbulent Mixing of Stellar Winds and Interstellar Gas
Kahn, F.D. **83**, 303
- The Diffuse Interstellar Line at 6284 Å
Schmidt-Kaler, Th., Tüg, H., Buchholz, M., Schlosser, W. **83**, 383; **39**, 305
- Interstellar Molecules: Hydrocarbon Formation on Graphite Grains at $T \geq 7\text{K}$
Bar-Nun, A., Litman, M., Rappaport, M.L. **85**, 197
- Infra-red Absorption Lines by Molecules in Grain Mantles
Hagen, W., Allamandola, L.J., Greenberg, J.M. **86**, L1
- Enhanced Interaction of the Solar Wind and the Interstellar Neutral Gas by Virtue of a Critical Velocity Effect
Petelski, E.F., Fahr, H.J., Ripken, H.W., Brenning, N., Axnäs, I. **87**, 20
- The Formation of Super-rings
Tenorio-Tagle, G. **88**, 61
- H I Absorption Measurements of Seven Low-latitude Pulsars
Weisberg, J.M., Rankin, J., Boriakoff, V. **88**, 84
- On Absolute and Convective Instabilities
Giaretta, D.L. **88**, 113
- Neutral Hydrogen 21 cm Galactic Spectra Observed at Arecibo Towards 45 Extragalactic Radio Sources
Crovisier, J., Kazès, I., Aubry, D. **88**, 283; **41**, 229
- The Distribution of the Interstellar Dust in the Galactic Plane within 3 kpc
Krautter, J. **89**, 74
- The Application of a Coherent Optical Data Processing System to Photographically Recorded Astronomical Spectra
Bates, B., Giaretta, D.L., Sweeney, P.J.P. **90**, 318
- Comparison of Solar Backscatter and Interstellar Absorption Measurements of the ISM
Meier, R.R. **91**, 62
- Population Inversion and Suprathermal Excitation in Carbon Monoxide
Köppen, J., Kegel, W.H. **91**, 262; **42**, 59
- X-ray Characteristics of Loop I and the Local Interstellar Medium
Davelaar, J., Bleeker, J.A.M., Deerenberg, A.J.M. **92**, 231
- Intermediate Velocity Clouds in the Region of the South Celestial Pole
Morras, R. **92**, 315
- Deuterium in the Solar System
Geiss, J., Reeves, H. **93**, 189
- Pairing of the Diffuse Interstellar Lines
Andriesse, C.D., de Vries, J. **93**, 403
- The Diffuse Interstellar Line at 4430 Å
Tüg, H., Schmidt-Kaler, Th. **94**, 16
- Atomic and Ionized Hydrogen Associated with NGC 281 (S 184)
Roger, R.S., Pedlar, A. **94**, 238
- Polar Solar Wind and Interstellar Wind Properties from Interplanetary Lyman- α Radiation Measurements
Witt, N., Ajello, J.M., Blum, P.W. **95**, 80
- Polarization of Starlight in M 17
Schulz, A., Lenzen, R., Schmidt, Th., Proetel, K. **95**, 94
- Wavelengths and Profiles of the $[\text{S III}] \ ^3P_{2,1} - ^1D_2$ Lines in Some Emission Nebulae
Hippelein, H., Münch, G. **95**, 100
- Self Similar Evolution of Evaporative Supernova Remnants
Chièze, J.P., Lazareff, B. **95**, 194
- Spiral Structure in the Galactic Nucleus?
Quiroga, R.J. **95**, 199
- Pulsar Statistics and Their Interpretations
Arnett, W.D., Lerche, I. **95**, 308
- Discovery of a Stellar Object with Surrounding Nebulosity
Vogt, N., Wamsteker, W., Breysacher, J., Schuster, H.-E. **96**, 120
- Observations of Diffuse Far Infrared Emission and Distribution of Interstellar Dust
Maihara, T., Oda, N., Shibai, H., Okuda, H. **97**, 139
- A Very-wide-field, High Luminosity, and High Spectral Resolution Camera for the Observation of the Diffuse, Ionized Component of the Galactic Interstellar Medium
Courtès, G., Sivan, J.P., Saisse, M. **97**, 334

- Kinematics of Ring-shaped Nebulae in the LMC. I. The Radial Velocity Field of N 70
Rosado, M., Georgelin, Y.P., Georgelin, Y.M., Laval, A., Monnet, G. **97**, 342
- Diffuse Interstellar Clouds. Number Density and Volume Filling Factor
Knude, J. **97**, 380
- Erratum: X-ray Characteristics of Loop I and the Local Interstellar Medium
Davelaar, J., Bleeker, J.A.M., Deerenberg, A.J.M. **97**, 413
- Kinematics of Stars and Interstellar Gas Along the Inner Side of the Carina Spiral Feature
Ardeberg, A., Maurice, E. **98**, 9
- High-Velocity Gas Toward the Galactic Center
Güsten, R., Downes, D. **99**, 27
- S 106: An H II-region Driven by a Stellar Wind?
Hippelein, H., Münch, G. **99**, 248
- The Thickness of the Hydrogen Layer and the Three-dimensional Mass Distribution in NGC 891
van der Kruit, P.C. **99**, 298
- Accurate ab initio Calculation of the HCS⁺ System
Chekir, S., Pauzat, F., Berthier, G. **100**, L14
- Statistics of Neutral Hydrogen Absorption Toward Pulsars
Dickey, J.M., Weisberg, J.M., Rankin, J.M., Boriakoff, V. **101**, 332
- Infrared Objects Near to H₂O Masers in Regions of Active Star Formation. II. Survey and 1-20 μ m Observations of Southern Sources
Moorwood, A.F.M., Salinari, P. **102**, 197
- On the Effects of Radiation Pressure in the Cores of Globular Clusters
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **102**, 250
- A High Resolution IUE Spectrum of the GO-G 5 Ia Supergiant HR 8752
Stickland, D.J., Lambert, D.L. **102**, 296
- Sextet Transitions in Fe II
Nussbaumer, H., Pettini, M., Storey, P.J. **102**, 351
- Multiple Scattering of Solar Resonance Radiation in the Nearby Interstellar Medium. II
Keller, H.U., Richter, K., Thomas, G.E. **102**, 415
- Synthesis Observations of the Radio Continuum Radiation of the H II Region NGC 7822 (W1)
Harten, R.H., Goss, W.M., Matthews, H.E., Israel, F.P. **103**, 50
- A Southern Atlas of Galactic Hydrogen. III. The Regions $320^\circ \leq l \leq 345^\circ$, $+18^\circ \leq b \leq +26^\circ$ and $346^\circ \leq l \leq 350^\circ$, $+18^\circ \leq b \leq +20^\circ$
Olano, C.A., Pöppel, W.G.L., Vieira, E.R. **103**, 208; **46**, 41
- Interstellar Polarization in the Immediate Solar Neighbourhood
Tinbergen, J. **105**, 53
- "Flip-flop" of Electric Potential of Dust Grains in Space
Meyer-Vernet, N. **105**, 98
- The Radio Morphology of Supernova Remnants
Shafer, P.A. **105**, 306
- Studies of Nearly Face-on Spiral Galaxies. I. The Velocity Dispersion of the H I Gas in NGC 3938
van der Kruit, P.C., Shostak, G.S. **105**, 351
- An Effelsberg-Green Bank Galactic H I Absorption Line Survey. I. The Observations
Mebold, U., Winnberg, A., Kalberla, P.M.K., Goss, W.M. **106**, 180; **46**, 389
- Classical rigid-ellipsoid model for Collisions of H₂ with HC₃N and HC₉N
Bhattacharyya, S.S., Dickinson, A.S. **107**, 26
- COS-B Gamma-ray Measurements, Cosmic Rays and the Local Interstellar Medium
Lebrun, F., Bignami, G.F., Buccheri, R., Caraveo, P.A., Hermesen, W., Kanbach, G., Mayer-Hasselwander, H.A., Paul, J.A., Strong, A.W., Wills, R.D. **107**, 390
- A Comparative Study of Computational Methods in Cosmic Gas Dynamics
van Albada, G.D., van Leer, B., Roberts, W.W., Jr. **108**, 76
- Extragalactic Gamma Radiation: Use of Galaxy Counts as a Galactic Tracer
Thompson, D.J., Fichtel, C.E. **109**, 352
- Global Properties of Sa-galaxies from H I-observations
Huchtmeier, W.K. **110**, 121
- The Structure of Orion B (NGC 2024): A Recombination Line and Continuum Map
Krügel, E., Thum, C., Martin-Pintado, J., Pankonin, V. **110**, 181; **48**, 345
- A Catalogue of Radio Sources within 30' of Cep A
Hughes, V.A., Viner, M.R., Wouterloot, J.G.A. **111**, 358
- On a Model of Local Gas Related to Gould's Belt
Olano, C.A. **112**, 195
- Formaldehyde Absorption Measurements of Selected Galactic Molecular Clouds
Bieging, J., Wilson, T.L., Downes, D. **112**, 394; **49**, 607
- Causal Relationship Between Pulsar Long-term Intensity Variations and the Interstellar Medium
Sieber, W. **113**, 311
- Model Calculations of the Molecular Composition of Interstellar Grain Mantles
Tielens, A.G.G.M., Hagen, W. **114**, 245
- An Effelsberg - Green Bank Galactic H I Absorption Line Survey. II. Results and Interpretation
Mebold, U., Winnberg, A., Kalberla, P.M.W., Goss, W.M. **115**, 223
- The Unprecedented Light Variations of NGC 2346
Méndez, R.H., Gathier, R., Niemela, V.S. **116**, L5
- Neutral hydrogen observations towards the Puppis Window of the Milky Way
Stacy, J.G., Jackson, P.D. **117**, 171; **50**, 377
- Vibration-rotation transition probabilities for the ground electronic X¹ Σ^+ state of HD
Abgrall, H., Roueff, E., Viala, Y. **117**, 172; **50**, 505
- The spatial distribution and spectral characteristics of the diffuse soft X-ray background
Singh, K.P., Agrawal, P.C., Manchanda, R.K., Naranan, S., Sreekantan, B.V. **117**, 319
- Pressure distribution at the inner boundary of an astropause caused by a compressible stellar wind
Fahr, H.J., Neutsch, W. **118**, 57
- Velocity fluctuations in the interstellar medium due to the gravitational interaction with the system of stars
Kegel, W.H., Völk, H.J. **119**, 101
- Excitation conditions in H II regions
Herter, T., Helfer, H.L., Pipher, J.L. **119**, 163; **51**, 195
- Fourier spectroscopy of the ¹²C¹³C and ¹³C₂ Phillips system
Amiot, C., Verges, J. **119**, 164; **51**, 257
- Modification of scattering waves and its importance for shock acceleration
Achterberg, A. **119**, 274
- IUE observations of the high velocity symbiotic star AG Draconis during active phase
Viotti, R., Ricciardi, O., Ponz, D., Giangrande, A., Friedjung, M., Cassatella, A., Baratta, G.B., Altamore, A. **119**, 285

IUE observations of high velocity interstellar gas tentatively associated with Radio Loop II

Bates, B., Brown-Kerr, W., Giaretta, D.L., Keenan, F.P. **122**, 64

Modification of the local interstellar gas properties in the heliospheric interface

Ripken, H.W., Fahr, H.J. **122**, 181

Large-scale magnetic field in the Perseus spiral arm

Vallée, J.P. **124**, 147

Medium size radio continuum loops and their association with H I shells

Sofue, Y., Nakai, N. **124**, 152; **53**, 57

Far ultraviolet observations of the expanding shell in Eridanus

Paresce, F., Jakobsen, P., Bowyer, S. **124**, 300

Diffuse light near Zeta Orionis and the Horsehead nebula, and anomalous extinction of HD 37903, as measured with the ANS

de Boer, K.S. **125**, 258

Estimated energy and momentum input to the interstellar medium for several external galaxies

Tarrab, I. **125**, 308

Branching ratios in the vacuum ultraviolet spectrum of neutral carbon

Tozzi, G.P., Huber, M.C.E., Pauls, U. **126**, 320

VLBI observations of the early-type galaxies NGC 2911 and NGC 4278

Schilizzi, R.T., Fanti, C., Fanti, R., Parma, P. **126**, 412

Young stars and bubbles in the Large Magellanic Cloud

Braunsfurth, E., Feitzinger, J.V. **127**, 113

Spatial structure of the extended ionized nebula around the radio galaxy IC 5063

Bergeron, J., Durret, F., Bokserberg, A. **127**, 322

Approximated collisional rates for CS-H₂ (*J*=0)

Albrecht, M.A. **127**, 409

Interstellar radiation field and dust temperatures in the diffuse interstellar matter and in giant molecular clouds

Mathis, J.S., Mezger, P.G., Panagia, N. **128**, 212

Interpretation of the non-circular motion near the galactic center

Rohlf, K. **128**, 426

Interstellar Radiation Field

On the Far-infrared Diffuse Galactic Emission

Drapatz, S. **75**, 26

Observations of the Interstellar Ultraviolet Radiation Field from the S2/68 Sky-survey Telescope

Gondhalekar, P.M., Phillips, A.P., Wilson, R. **85**, 272

Contribution of the Warm Intercloud Medium to the Diffuse Ultraviolet Background

Deharveng, J.M., Joubert, M., Barge, P. **109**, 179

The spatial distribution and spectral characteristics of the diffuse soft X-ray background

Singh, K.P., Agrawal, P.C., Manchanda, R.K., Naranan, S., Sreekantan, B.V. **117**, 319

Far ultraviolet observations of the expanding shell in Eridanus

Paresce, F., Jakobsen, P., Bowyer, S. **124**, 300

Interstellar radiation field and dust temperatures in the diffuse interstellar matter and in giant molecular clouds

Mathis, J.S., Mezger, P.G., Panagia, N. **128**, 212

Interstellar Reddening, see Interstellar Absorption and Extinction

Intrinsic Colors

Circumstellar Absorption and Intrinsic Colours of Massive Stars

Ardeberg, A., Maurice, E. **91**, 53

Ultraviolet Intrinsic Colours of Early Type Stars

Llorente de Andrés, F., Morales, C., Ruiz del Arbol, J.A., Pérez Mollá, J. **100**, 138

The Two-colour Diagram of Luminous Stars in the Magellanic Clouds (Text in German)

Isserstedt, J. **115**, 97

Near-infrared photometry. II. Intrinsic colours and the absolute calibration from one to five micron

Koornneef, J. **128**, 84

Ionization

On Time-dependent Ionization in Stellar Chromospheres

Kneer, F. **87**, 229

Ionization Front Structure Dependence on Boundary Conditions

Mason, D.J. **92**, 117

Free-Free Emission from Extended Envelopes. II. The Mass Loss and the Envelope Ionization

Felli, M., Panagia, N. **102**, 424

The State of Ionization in Dense Molecular Clouds

Guélin, M., Langer, W.D., Wilson, R.W. **107**, 107

A Catalogue of Model HII Regions

Stasinska, G. **110**, 180; **48**, 299

The Temperature Dependence of the HCO⁺/DCO⁺ Abundance Ratio in Dense Interstellar Clouds

Herbst, E. **111**, 76

Modification of the Ionization Balance of the Upper Chromosphere Due to XUV Irradiation in Flares

Chambe, G. **113**, 31

The OIII/OII problem in medium and high excitation planetary nebulae

Che, A., Köppen, J. **118**, 107

Excitation conditions in HII regions

Herter, T., Helfer, H.L., Pipher, J.L. **119**, 163; **51**, 195

Hydrogen at high pressures and temperatures

Robnik, M., Kundt, W. **120**, 227

The Crab Nebula. I. Photoionization models of a bright filament

Péquignot, D., Dennefeld, M. **120**, 249

Models of the planetary nebulae II 2003, NGC 3242, 6210, and 7009: constraints on the ionizing radiation of the central star

Köppen, J. **122**, 95

Dielectronic recombination at low temperatures

Nussbaumer, H., Storey, P.J. **126**, 75

Planetary nebulae with massive nuclei. I. Time-dependent photoionization models

Tylanda, R. **126**, 299

Excitation of CII lines by photoionization of neutral carbon

Hofmann, H., Saha, H.P., Treffitz, E. **126**, 415

Composite models for the narrow emission line region of active galactic nuclei. I. The infalling filament

Contini, M., Aldrovandi, S.M.V. **127**, 15

Irregular Galaxies

Stochastic star formation and chemical evolution of dwarf irregular galaxies

Matteucci, F., Chiosi, C. **123**, 121

Discovery of a Wolf-Rayet star in NGC 6822

Westerlund, B.E., Azzopardi, M., Breysacher, J., Lequeux, J. **123**, 159

Isotopes

Theoretical Evaluation of the Distribution of ^{13}C in Cyanoacetylene at Thermodynamic Equilibrium

Wolfsberg, M., Bopp, P., Heinzinger, K., Mallinson, P.D. **74**, 369

Turbulent Diffusion in Stars and the ($^{12}\text{C}/^{13}\text{C}$) Abundance Ratio

Genova, F., Schatzman, E. **78**, 323

Formaldehyde in Giant Molecular Clouds: H_2 Densities and Corrections to the ($^{12}\text{C}/^{13}\text{C}$) Ratios

Henkel, C., Walmsley, C.M., Wilson, T.L. **82**, 41

CO Observations of Interstellar Clouds: Isotopic Ratios

Combes, F., Falgarone, E., Guibert, J., Nguyen-Q-Rieu **90**, 88

Isotopes Anomalies in Meteorites and the Origin of the Galactic Cosmic Rays

Audouze, J., Chièze, J.-P., Vangioni-Flam, E. **91**, 49

Determination of stellar neutron-capture rates for radioactive nuclei with the aid of β -delayed neutron emission

Kratz, K.-L., Ziegert, W., Hillebrandt, W., Thielemann, F.-K. **125**, 381

Formaldehyde towards compact H II: densities and isotope ratios

Henkel, C., Wilson, T.L., Walmsley, C.M., Pauls, T. **127**, 388

The isotopic abundance of interstellar oxygen derived from 18-cm line observations

Bujarrabal, V., Cernicharo, J., Guélin, M. **128**, 355

The interaction of supernova shockfronts and nearby interstellar clouds

Krebs, J., Hillebrandt, W. **128**, 411

Jet

One-sided Jets in Extragalactic Radiosources

van Groningen, E., Miley, G.K., Norman, C.A. **90**, L7

Multifrequency Observations of Extended Radio Galaxies. IV. The Large Radio Jet Galaxy 4CT 74.17.1

van Breugel, W.J.M., Willis, A.G. **96**, 332

Morphology and Photometry of the Nebulosity Associated with 3C 120

Wlêrick, G., Bouchet, P., Cayatte, V., Michet, D. **102**, L17

On Symmetric Structure in Compact Radio Sources

Phillips, R.B., Mutel, R.L. **106**, 21

High-resolution Observations of M 87. I. The Morphology of the Jet

Nieto, J.-L., Lelièvre, G. **109**, 95

Multifrequency High Resolution Observations of the Large Radio Galaxy B2 1321+31

Fanti, R., Lari, C., Parma, P., Bridle, A.H., Ekers, R.D., Fomalont, E.B. **110**, 169

Multifrequency Comparison of the Total Intensity and Polarization Distributions for 3C 31, 3C 66 B, and 3C 129

van Breugel, W. **110**, 225

Multifrequency Observations of Extended Radio Galaxies V: 3C 31, 3C 33.1, 3C 35, 3C 66B, 3C 129, 3C 130, 3C 223, 3C 310, 3C 390.3 and 4C 48.29

Van Breugel, W., Jägers, W. **112**, 180; **49**, 529

Nonlinear Shear Instabilities in an Infinite Slab

Nepveu, M. **112**, 223

Structure of Dynamics of Supersonic Jets

Norman, M.L., Smarr, L., Winkler, K.-H. A., Smith, M.D. **113**, 285

The Influence of Buoyancy on the Stability of Jets

Achterberg, A. **114**, 233

Local Coupling of Surface MHD Waves with Kinetic Alfvén Waves in Jets

Bodo, G., Ferrari, A. **114**, 394

Multifrequency WSRT observations of the radio galaxy 3C 31

Strom, R.G., Fanti, R., Parma, P., Ekers, R.D. **122**, 305

X-ray observations of radio-jet galaxies

Miley, G.K., Norman, C., Silk, J., Fabbiano, G. **122**, 330

Nutation-like effects in SS 433

Ciatti, F., Mammano, A., Iijima, T., Vittone, A. **123**, 360; **52**, 443

Determination of physical parameters in extragalactic radio jets from large scale, small amplitude oscillations

Ferrari, A., Trussani, E., Zaninetti, L. **125**, 179

The compact radio core of Mkn 348: evidence for directed outflow in a type 2 Seyfert galaxy

Neff, S.G., de Bruyn, A.G. **128**, 318

Jupiter, see also Planets

Jupiter's Radiation Belts and Atmosphere

de Pater, I., Dames, H.A.C. **72**, 148

Modulation Lanes in the Danymic Spectra of Jupiter's Decametric Radio Bursts

Riihimaa, J.J. **78**, L21

Positions of Jupiter and Four Satellites Obtained in 1978 at ESO-La Silla by Means of the GPO ($f=400$ cm, $d=40$ cm)

Debehogne, H., Machado, L.E. **78**, 251; **38**, 275

Spectropolarimetry of Venus and Jupiter Clouds: Information Content of Equivalent Widths

Buriez, J.C., Fouquart, Y., Fymat, A.L. **79**, 287

High Spectral Resolution Observations of Jupiter between 30 and 50 μm

Baluteau, J.P., Marten, A., Moorwood, A.F.M., Anderegg, M., Biraud, Y., Coron, N., Gautier, D. **81**, 152

Methan Line Profiles near 1.1 μm as a Probe of the Jupiter Cloud Structure and C/H Ratio

Buriez, J.C., de Bergh, C. **83**, 149

Observations of the Jovian Radiation at 11 and 18 cm Wavelength

Neidhöfer, J., Morris, D., Wilson, W. **83**, 297

The Spectrum of Jupiter Between 8 and 9 μm : Estimates of the Jovian C/H and D/H Ratios

Encrenaz, Th., Combes, M., Zeau, Y. **84**, 148

Observations photographiques de Mars, de Jupiter et de ses satellites ainsi que de Saturne, effectuées en 1978 à l'astrographe double de 40 cm de l'Observatoire royal de Belgique

Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **85**, 266; **40**, 249

Observations photographiques de Jupiter et ses satellites, effectuées en 1977 à l'astrographe double de 40 cm de l'Observatoire Royal de Belgique

Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **86**, 269; **40**, 363

Jupiter and Galilean Satellites' Positions Obtained in April 1978 with the GPO 40 cm ($f=4$ M) of the ESO, La Silla

Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **86**, 269; **40**, 375

Non-10 Decametric Radiation from Jupiter at Frequencies above 30 MHz

Barrow, C.H., Desch, M.D. **86**, 339

The Jovian S-bursts. I. Occurrence with L-bursts and Frequency Limit

Leblanc, Y., Genova, F., de la Noë, J. **86**, 342

The Jovian S-bursts. II. Frequency Drift Measurements of Different Frequencies Throughout Several Storms

Leblanc, Y., Aubier, M.G., Rosolen, C., Genova, F., de la Noë, J. **86**, 349

Lyman Alpha Albedo of Jupiter and Solar Activity

Vidal-Madjar, A., Emerich, C., Cazes, S. **87**, L12

21 cm Maps of Jupiter's Radiation Belts from all Rotational Aspects

de Pater, I. **88**, 175

Maximum Frequency of the Decametric Radiation from Jupiter

Barrow, C.H., Alexander, J.K. **90**, L4

Erratum: Non-Io Decametric Radiation from Jupiter at Frequencies Above 30 MHz

Barrow, C.H., Desch, M.D. **91**, 378

Periodic Planetary-type Orbits of the General 4-Body Problem with an Application to the Satellites of Jupiter

Hadjidemetriou, J.D., Michalodimitrakis, M. **93**, 204

Radio Maps of Jupiter's Radiation Belts and Planetary Disk at λ 6 cm

de Pater, I. **93**, 370

Jupiter's Decametric Radio Emission: A Nice Problem of Optics

Lecacheux, A., Meyer-Vernet, N., Daigne, G. **94**, L9

Great Inequalities and Libration Terms of Satellites I, II, and III of Jupiter

Vu, D.T. **94**, 140

Dynamic Spectra of Some Terrestrial Ionospheric Effects at Decametric Wavelengths. Applications in Other Astrophysical Contexts

Meyer-Vernet, N., Daigne, G., Lecacheux, A. **96**, 296

Interplanetary Scintillation and Jovian DAM Emission

Genova, F., Leblanc, Y. **98**, 133

Perturbations by Jupiter of a Chain of Objects Moving in the Orbit of Comet Oterma

Carusi, A., Kresák, L., Valsecchi, G.B. **99**, 262

Catalogue of Eclipses of Jupiter's Galilean Satellites, 1610-2000

Lieske, J.H. **99**, 402; **44**, 209

Latitudinal Beaming and Local Time Effects in the Decametre-wave Radiation from Jupiter Observed at the Earth and from Voyager

Barrow, C.H. **101**, 142

Jupiter and Galilean Satellites' Positions Obtained in December 1978 at Uccle with the Double Astrograph of 40 cm ($f=2$ m)

Debehogne, H., Machado, L.E. **102**, 279; **45**, 183

Spectral Types and Radial Velocities of Southern OB+ Stars

Drilling, J.S., Perry, C.L. **102**, 281; **45**, 439

A Catalogue of Jupiter's Decametric Emission Observed by Voyager-1 and by Voyager-2 in the Range 15-40 MHz

Barrow, C.H. **103**, 209; **46**, 111

Positions of Jupiter, Galilean Satellites and Pluto Obtained in May 1980 with the GPO of the ESO, La Silla

Debehogne, H., Machado, L.E., Caldeira, J.F., Netto, E.R., Vieira, G.G. **103**, 210; **46**, 131

A Catalogue of Jovian Decametric Radio Observations from January 1978 to December 1979

Leblanc, Y., de la Noë, J., Genova, F., Gerbault, A., Lecacheux, A. **103**, 210; **46**, 135

Positions of Jupiter and Galilean Satellites in 1978

Debehogne, H., Machado, L.E., Netto, E.R., Caldeira, J.F., Vieira, G.G. **104**, 169; **46**, 171

Modulations in Jovian Decametric Spectra: Propagation Effects in Terrestrial Ionosphere and Jovian Environment

Genova, F., Aubier, M.G., Lecacheux, A. **104**, 229

Arc Structures in the Jovian Decametric Emission Observed from the Earth and from Voyager

Barrow, C.H., Lecacheux, A., Leblanc, Y. **106**, 94

New Constants for the Sampson-Lieske Theory of the Galilean Satellites of Jupiter

Arlot, J.-E. **107**, 305

Motion of the Jovian Commensurability Resonances and the Character of the Celestial Mechanics in the Asteroid Zone: Implications for Kinematics and Structure

Torbett, M., Smoluchowski, R. **110**, 43

Results of the PHEMU79 Observation Campaign of Mutual Phenomena of the Galilean Satellites of Jupiter in 1979 (Text in French)

Arlot, J.-E., Bernard, A., Bouchet, P., Daguiillon, J., Dourneau, G., Figer, A., Helmer, G., Lecacheux, J., Merlin, Ph., Meyer, C. **111**, 151

Observations of Jupiter with the Astrolabe of the CERGA Observatory (January 1978 - May 1979) (Text in French)

Vigouroux, G., Delmas, C., Guallino, G., Mignard, F., Pham-Van, J. **111**, 211; **49**, 107

A Narrow-band Splitting at the Jovian Decametric Cutoff Frequency

Leblanc, Y., Rubio, M. **111**, 284

Improvement of the Theories of Jupiter and Saturn by Harmonic Analysis (in French)

Simon, J.L., Francou, G. **114**, 125

Jupiter's satellites J VI and J VII. Ephemerides for the years 1981 to 1990

Rocher, P. **121**, 332; **52**, 333

Observations of Jupiter with the astrolabe of the CERGA Observatory (February 1980-May 1981)

Vigouroux, G., Dudognon, G., Granès, P., Mignard, F., Pham-Van, J. **126**, 221; **53**, 361

Theory of the phenomena of Jupiter's Galilean satellites (Text in French)

Thuillot, W. **127**, 63

Continuing investigation of sweeping Jovian resonances. The 7:3 and 3:2 resonances with further discussion of the 2:1 resonance

Torbett, M.V., Smoluchowski, R. **127**, 345

A catalogue of Jovian decametric radio observations from January 1980 to December 1981

Leblanc, Y., Gerbault, A., Rubio, M., Genova, F. **127**, 424; **54**, 135

K Stars

Detection of a stellar prominence of the K supergiant 32 Cyg

Schröder, K.-P. **124**, L16

Narrow-band photometry of G and K stars near the North Galactic Pole

Hansen, L., Radford, G.A. **126**, 223; **53**, 427

Analysis of three K-type dwarf stars: HD 10476, HD 17925, and HD 37394

Perrin, M.-N. **128**, 347

Kelvin-Helmholtz-Instability, see **Instability**

Kinematics, see **Stellar Dynamics and Kinematics**

Late Type Stars, see also **Barium Stars**, **Carbon Stars**, **M Stars**, **S Stars**

The OI Triplet λ 7773 Å in Late-type Giant Stars

Eriksson, K., Toft, S.C. **71**, 178

- Spectral Classification from the Ultraviolet Line Features of S 2/68 Spectra. IV. Late-type Stars
Cucchiaro, A., Macau-Hercot, D., Jaschek, M., Jaschek, C. **71**, 270; **35**, 75
- Semi-theoretical Density Profiles for Late-type Giants along the Galactic Radius through the Sun
Spaenhauer, A.M., Fenkart, R.P. **71**, 274; **35**, 249
- New OH Sources in CRL Objects and Late Type Stars. On the Correlation of OH Velocity Pattern and Stellar Period
Le Squeren, A.M., Baudry, A., Bizillet, J., Darchy, B. **72**, 39
- Catalogue of Late-type Stars with OH, H₂O of SiO Maser Emission
Engels, D. **75**, 259; **36**, 337
- Infrared Limb-darkening Coefficients for Late-type Giant Model Atmospheres
Manduca, A. **75**, 261; **36**, 411
- On the MK Spectral Classification of Metal-poor Late-type Stars
Foy, R. **78**, 25
- Photoelectric Calibration of the H and K Lines and Nearby Continuum of Late Type Stars
Catalano, S. **80**, 317
- Discoveries on Southern, Red-sensitive Objective-prism Plates. II. New S/MS, Carbon and SC Stars
Mac Connell, D.J. **80**, 329; **38**, 329
- Theoretical Stellar Chromospheres of Late Type Stars. IV. Temperature Minima for Dwarf Stars
Schmitz, F., Ulmschneider, P. **84**, 93
- Theoretical Stellar Chromospheres of Late Type Stars. III. Models for Procyon, Capella, Pollux, and 70 Ophiuchi A
Schmitz, F., Ulmschneider, P. **84**, 191
- A Model Atmosphere of the Late Type Dwarf ϵ Indi
Kollatschny, W. **86**, 308
- Near Infrared Polarimetry of Cool Stars
McCall, A., Hough, J.H. **91**, 379; **42**, 141
- Spectroscopic Analysis of Pollux Relative to the Sun with Special Reference to Arcturus
Ruland, F., Holweger, H., Griffin, R., Griffin, R., Biehl, D. **92**, 70
- IUE Observations of Two Late Type Stars: R Aql and W Hya
Kafatos, M., Michalitsianos, A.G., Hobbs, R.W. **92**, 320
- Line Blocking and Equivalent Widths in the Spectrum of Pollux
Ruland, F., Griffin, R., Griffin, R., Biehl, D., Holweger, H. **92**, 325; **42**, 391
- Sunspot Chromospheres and Their Relation to the Chromospheres of Late Main Sequence Stars
Mattig, W., Kneer, F. **93**, 20
- Theoretical Stellar Chromospheres of Late Type Stars. V. Temperature Minimum in the Grey LTE Approach
Schmitz, F., Ulmschneider, P. **93**, 178
- A New Method for Determining the Rotation of Late Spectral Type Stars
Benz, W., Mayor, M. **93**, 235
- Detailed Analysis of Cool Giants with Low Microturbulent Velocity
Foy, R. **93**, 315
- Observations of Late Type Objects with a New Spectrophotometer in the 8-13 μ m Range
Schulte in den Bäumen, J., Hefele, H., Hölzle, E., Ortlieb, N. **94**, 280
- Indications for Rotation Modulation and Short-term Variations in the Ca II H and K Emission from Cool Main Sequence Stars
Middelkoop, F., Vaughan, A.H., Preston, G.W. **96**, 401
- Luminous Late-type Stars in Reflection Nebulae and/or in Very Young Stellar Clusters
Gahm, G.F., Hultqvist, L., Liseau, R. **98**, 341
- Spectral Energy Distribution and Effective Temperature Scale of M-giant Stars. II. Application of the Infra-red Flux Method
Tsuji, T. **99**, 48
- Epsilon Eridani: Active Chromosphere Associated with Enhanced Microturbulence
Steenbock, W., Holweger, H. **99**, 192
- Magnetic Structure in Cool Stars. I. The Ca II H and K Emission from Giants
Middelkoop, F., Zwaan, C. **101**, 26
- Magnetic Structure in Cool Stars. II. Observational Evidence for Transverse Magnetic Fields
Tinbergen, J., Zwaan, C. **101**, 223
- A Contribution to the Determination of the Mass of Arcturus
Spite, M., Martin, P. **101**, 265
- Magnetic Structure in Cool Stars. III. Ca II H and K Emission and Rotation of Main-sequence Stars
Middelkoop, F. **101**, 295
- Analysis of the Far Ultraviolet Emission Lines in Late Type Stars
de Castro, E., Fernández-Figueroa, M.J., Rego, M., Ponz, D. **102**, 207
- UBVR Photometry of FK Comae
Rucinski, S.M. **104**, 260
- Differential Rotation, Magnetic Activity and X-ray Emission of Late Type Giants
Belvedere, G., Chiuderi, C., Paternò, L. **105**, 133
- Spectra of the Red (2,0) CN Band in 31 G and K Giant Stars
Kjaergaard, P., Walker, G.A.H., Yang, S. **106**, 180; **46**, 375
- New Infrared Counterparts of Southern Type II OH Maser Sources
Epchtein, N., Nguyen-Quang-Rieu **107**, 229
- On the Widths of the Ca II K Emission in Late-type Stars
Severino, G. **109**, 90
- Magnetic Structure in Cool Stars. V. Chromospheric and Transition-region Emission from Giants
Oranje, B.J., Zwaan, C., Middelkoop, F. **110**, 30
- Discoveries on Southern, Red-sensitive Objective-prism Plates. IV. Extension to Higher Latitudes
Mac Connell, D.J. **110**, 181; **48**, 355
- Monte Carlo Study of Highly Polarized Cool Stars
Daniel, J.-Y. **111**, 58
- Molecules in Red-giant Stars. I. Column Densities in Models for K and M Stars
Johnson, H.R., Sauval, A.J. **111**, 210; **49**, 77
- Terrestrial O₂ Lines Used as Wavelength References: Comparison of Measurements and Model Computations
Balthasar, H., Thiele, U., Wöhl, H. **114**, 357
- The Angular Diameter of Betelgeuse
Balega, Y., Blazit, A., Bonneau, D., Koehlin, L., Foy, R., Labeyrie, A. **115**, 253
- Detection and BVR photometry of late type stars in the Large Magellanic Cloud
Rebeiro, E., Martin, N., Mianes, P., Prévot, L., Robin, A., Rousseau, J., Peyrin, Y. **119**, 165; **51**, 277
- Stellar interferometry: diameters and effective temperatures of five giant stars (Text in French)
Faucherre, M., Bonneau, D., Koehlin, L., Vakili, F. **120**, 263
- A photometric atlas of the spectrum of γ Tauri $\lambda\lambda$ 5186-8700 Å
Appelquist, L., Andersen, J., Fisher, W.A., Fletcher, J.M., Kjaergaard, P. **121**, 330; **52**, 237

Determination of the atmospheric parameters of late-type stars from low resolution spectra

Thévenin, F., Foy, R. **122**, 261

Molecular hydrogen lines in the infrared spectra of M-giant stars

Tsuji, T. **122**, 314

Note on technetium in stars

Schatz, G. **122**, 327

The peculiar circumstellar envelope around IRC + 10420

Diamond, P.J., Norris, R.P., Booth, R.S. **124**, L4

Spectrum analysis of the barium stars HD 83548 and HD 65699

Kovács, N. **124**, 63

Radial velocities of bright southern stars. III. Late-type standard stars at 12 Å mm^{-1}

Andersen, J., Nordström, B. **125**, 177; **53**, 287

The possible long-period eclipsing binary BM Eri

Ahlin, P., Sundman, A. **125**, 391

Dust-driven winds. I. A two-fluid model and its numerical solution

Berruyer, N., Frisch, H. **126**, 269

Mass-luminosity relation and initial mass function at the faint end of the main sequence. Is there a real deficit of very low-mass stars?

D'Antona, F., Mazzitelli, I. **127**, 149

Coronal activity in F-, G-, and K-type stars. I. Relations between parameters characterizing stellar structure and activity

Schrijver, C.J. **127**, 289

On radiative shocks in atomic and molecular stellar atmospheres. I. Dominant physical phenomena

Gillet, D., Lafon, J.-P.J. **128**, 53

The D_3 5876 Å line in main sequence stars: a search for rotational modulation in ϵ Eri and κ Cet

Lambert, D.L., O'Brien, G.T. **128**, 110

Ground-based infrared spectrophotometry of evolved objects and late-type stars

Eiroa, C., Hefele, H., Zhong-yu, Q. **128**, 262; **54**, 309

A possible explanation of the Wilson-Bappu relation and the chromospheric temperature rise in late-type stars

Kneer, F. **128**, 311

Latitude Observations

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1977

Buffoni, L., Chlistovsky, F., Manara, A., Mazzoleni, F. **72**, 379; **35**, 345

Results of Observations Made at Valinhos with the Astrolabe. Time and Latitude 1974 to 1977

Benevides, P., Boczo, R., Clauzet, L.B.F., Leister, N.V. **75**, 260; **36**, 401

Results of Observations Made at Paris with the Astrolabe Time and Latitude 1977-1978

Chollet, F., Débarbat, S. **76**, 368; **37**, 477

Results of Observations Made with the Astrolabe of Santiago from 1972 to 1976

Noël, F. **81**, 389; **39**, 89

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1978

Buffoni, L., Chlistovsky, F., Manara, A., Mazzoleni, F. **91**, 379; **42**, 177

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1979

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **99**, 204; **44**, 97

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1980

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **104**, 169; **46**, 179

Danjon Astrolabe Observations at Rio de Janeiro: Time and Latitude

Andrei, A.H., d'Ávila, V.A., Penna, J.L., Queiroz, M. **110**, 183; **48**, 485

A New Method of Determination of the Pole Motion in a Uniform System

Takagi, S. **112**, 11

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1981

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **112**, 179; **49**, 509

Effect of Different Sources of Variation of Latitude Data on Meridian Circle Catalogues

Rafferty, T.J. **114**, 420; **50**, 27

Results of Observations Made in Paris with the Astrolabe (Text in French)

Chollet, F., Débarbat, S., Hascoët, J.C., Lam, S.K., Texier, P., Tomas, M. **115**, 217; **50**, 195

Results of observations made with the Astrolabe of Santiago from 1977 to 1980

Noël, F. **119**, 164; **51**, 219

Corrections for the gravitational deflection of light in the case of observations with an astrolabe

Li, Z.X. **123**, 22

Time and latitude results of observations made at Merate Observatory with the astrolabe for the year 1982

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **124**, 152; **53**, 43

Limb Brightening, ... Darkening

Limb Darkening Coefficients from Line Blanketed Model Atmospheres

Muthsam, H. **71**, 274; **35**, 253

Solar Continuum Data on Absolute Intensities, Center to Limb Variations and Laplace Inversion between 1400 and 2100 Å

Samain, D. **74**, 225

On the Center to Limb Variation of the Granular Brightness Fluctuations

Schmidt, W., Deubner, F.-L., Mattig, W., Mehlretter, J.P. **75**, 223

Infrared Limb-darkening Coefficients for Late-type Giant Model Atmospheres

Manduca, A. **75**, 261; **36**, 411

Apparent Spectral Inconsistencies Due to the Gravity Darkening of Pole-on Rapidly-rotating B-type Stars

Kodaira, K., Hoekstra, R. **78**, 292

The Solar Limb Darkening Function at 5012 Å and Its Possible Variations

Wittmann, A. **83**, 312

Resonance-line Polarization. IV. Observations of Non-magnetic Line Polarization and Its Center-to-limb Variations

Stenflo, J.O., Baur, T.G., Elmore, D.F. **84**, 60

Absolute Fluxes, Equivalent Width and Centre-to-limb Profiles of the Solar Mg II Resonance Lines (I)

Greve, A., McKeith, C.D. **90**, 224

Radio Maps of Jupiter's Radiation Belts and Planetary Disk at λ 6 cm

de Pater, I. **93**, 370

High Resolution Interferometric Observations of the Solar Limb at 4.9 and 10.7 GHz During the Solar Eclipse of October, 1977

Marsh, K.A., Hurford, G.J., Zirin, H. **94**, 67

Granular-size Horizontal Velocities in the Solar Atmosphere

Mattig, W., Mehlretter, J.P., Nesis, A. **96**, 96

Solar Oscillations and Limb Darkening Fluctuations

Yerle, R. **100**, L23

Observation of the Extreme Solar Limb at 3.9 μm During the Partial Solar Eclipse of 10 July, 1972

Clark, T.A., Clay, R.W. **100**, 254

Erratum: Solar Oscillations and Limb Darkening Fluctuations

Yerle, R. **103**, 428

Line Blanketing

Line Blanketed Model Atmospheres of Ap Stars II Numerical Results

Muthsam, H. **71**, 271; **35**, 107

Limb Darkening Coefficients from Line Blanketed Model Atmospheres

Muthsam, H. **71**, 274; **35**, 253

Line Blanketed Model Atmospheres of Ap Stars. III. α^2 Canum Venaticorum

Muthsam, H., Stepień, K. **86**, 240

Simulation of Variable Ultraviolet Line Blanketing in Ap Si Stars

Borsenberger, J., Jamar, C. **91**, 247

Line Blanketed Model Atmospheres of Ap-Stars. V. The Hg-Mn Stars 53 Tau and κ Cnc

Stepień, K., Muthsam, H. **100**, 159

On the "Just Overlapping Line Approximation" for Molecular Absorption

Zeidler-K.T., E.-M., Koester, D. **113**, 173

Line Blending

A Criterion for the Measurement of Equivalent Widths

Crivellari, L., Mardrossian, F., Morossi, C. **72**, 256

Methods for the Analysis of Stellar Spectra Veiled by Lines (III)

Greve, A., Zwaan, C. **90**, 239

Line Blocking

Solar Line Blocking for $\lambda\lambda$ 4006-6860

Ardeberg, A., Virdefors, B. **73**, 370; **36**, 317

The Unimportance of Line Blocking in the Spectra of Accretion Disks

Wesemael, F. **77**, 354

Line Blocking in the Near Ultraviolet Spectrum of Early Type Stars II. The Dependence on Spectral Type and Luminosity for Normal Stars

Llorente de Andrés, F., Lamers, H.J.G.L.M., Müller, E.A. **80**, 330; **38**, 367

A Comparison Between the Observed and Predicted UV Line Blocking for Blanketed Model Atmospheres of Early Type Stars

Castelli, F., Lamers, H.J.G.L.M., Llorente de Andrés, F., Müller, E.A. **91**, 32

Line Blocking and Equivalent Widths in the Spectrum of Pollux

Ruland, F., Griffin, R., Griffin, R., Biehl, D., Holweger, H. **92**, 325; **42**, 391

Line Broadening

Electron Impact Broadening of Aluminium I-Lines

Röndigs, G., Kusch, H.J. **71**, 44

Stark Broadening of Fe I 5383 Å

Freudenstein, S., Cooper, J. **71**, 283

Nonthermal Broadening of Extreme Ultraviolet Emission Lines near the Solar Limb

Mariska, J.T., Feldman, U., Doschek, G.A. **73**, 361

On the Broadening of Spectral Lines by the Interaction of Photons with a New Field

Schatzman, E. **74**, 12

The Stark Width of the Art-Line 3949 Å in a Medium Electron Density Plasma

Röndigs, G., Kusch, H.J. **75**, 182

Pressure Broadening of Radio Recombination Lines from Multiple-component H II Regions

Shaver, P.A. **78**, 116

Collisional Broadening of Spectral Lines in Laboratory and Solar Spectra. I. The 6162, 6122, 6102 Å Multiplet of Neutral Calcium

O'Neill, J.A., Smith, G. **81**, 100

Collisional Broadening of Spectral Lines in Laboratory and Solar Spectra. II. Low Excitation Lines of Neutral Iron

O'Neill, J.A., Smith, G. **81**, 108

A Solar Abundance of Nickel Independent of Line Broadening Parameters

Biémont, E., Grevesse, N., Huber, M.C.E., Sandeman, R.J. **87**, 242

Broadening of Non-LTE Lines by a Turbulent Velocity Field with a Finite Correlation Length

Froeschlé, Ch., Frisch, H. **91**, 202

Spectroscopy of Suspected Peculiar DA White Dwarfs. II. Atmospheric Parameters and Radii

Schulz, H., Wegner, G. **94**, 272

Semiempirical Stark Linewidths of Alkali Like Ions

Dimitrijević, M.S., Konjević, N. **102**, 93

On Solar Hydrogen Lines in the Far-infrared and Submillimeter Spectrum

Hoang-Binh, D. **112**, L3

On the Variation of Stark Line Widths Within a Supermultiplet

Dimitrijević, M.S. **112**, 251

Experimental Stark Broadening Data of Si II and Si III Lines

Kusch, H.J., Schröder, K. **116**, 255

Hydrogen line broadening in the presence of a magnetic field with the unified classical path theory

Mathys, G. **125**, 13

Estimated Stark widths and shifts of neutral atom and singly charged ion resonance lines

Lakićević, I.S. **127**, 37

Line Formation, see also Equivalent Widths

Formation of the Hydrogen Lyman α Line in Expanding Spherical Planetary Nebulae

Wehrse, R., Peraiah, A. **71**, 289

Formation of Permitted Lines in the Spectrum of Type I Seyfert Galaxies and Quasars Fe II Lines, Preliminary Discussion

Collin-Souffrin, S., Joly, M., Heidmann, N., Dumont, S. **72**, 293

The Effect of Waves on Spectral Line Analysis

Durrant, C.J. **73**, 137

Line Formation in an Unresolved Magnetic Element: A Test of the Centre of Gravity Method

Rees, D.E., Semel, M.D. **74**, 1

The Effect of Waves on Spectral Line Analysis in the Fourier Domain

Durrant, C.J. **76**, 208

Cyclotron Line Formation by Resonant Compton-cyclotron Scattering in Hercules-X1

Bonazzola, S., Heyvaerts, J., Puget, J.L. **78**, 53

- Spectral Line Formation in Axisymmetric Moving Envelopes: Method and Application to YY Orionis Stars
Bertout, C. **80**, 138
- Non-LTE Transfer. V. The Asymptotics of Partial Redistribution
Frisch, H. **83**, 166
- Formation of Permitted Lines in the Spectrum of Type I Seyfert Galaxies and Quasars. II. Fe II Lines and the Low Excitation Region
Collin-Souffrin, S., Dumont, S., Heidmann, N., Joly, M. **83**, 190
- Mechanical Flux in the Solar Chromosphere. I. Velocity and Temperature Weighting Functions for Ca II Lines
Mein, N., Mein, P. **84**, 96
- Mechanical Flux in the Solar Chromosphere. II. Determination of the Mechanical Flux
Schmieder, B., Mein, N. **84**, 99
- A Comparison of Three Methods for Computing Line Profiles in Spherical Envelopes
Bastian, U., Bertout, C., Stenholm, L., Wehrse, R. **86**, 105
- The Formation of the Mg II Resonance Line Wings in the Solar Atmosphere (II)
Greve, A. **90**, 231
- Small-scale Velocity Fields and Mean Line Profiles
Durrant, C.J. **91**, 251
- The Formation of Na I Spectral Lines in the Solar Atmosphere
Caccin, B., Gomez, M.T., Roberti, G. **92**, 63
- Line Formation in Expanding Atmospheres: On the Validity of the Sobolev Approximation
Hamann, W.-R. **93**, 353
- On the Stimulated Emission Terms in Partial Redistribution Calculations
Baschek, B., Mihalas, D., Oxenius, J. **97**, 43
- Thermal Overlap Effects and Collision Models: HCN
Guilloteau, S., Baudry, A. **97**, 213
- Model Analysis of SN 1969I
Hempe, K. **98**, 19
- On the Importance of Convective Transport of Excited Atoms in Stellar Atmospheres
Hubeny, I. **100**, 314
- Formation and Transfer of Permitted Si II Emission Lines in Seyfert I Galaxies and Quasars
Dumont, A.M., Mathez, G. **102**, 1
- Importance of the Doppler Differential Effect in the Interpretation of Active Nuclei Spectra. I. The Hydrogen Spectrum
Gordon, C., Collin-Souffrin, S., Dultzin-Hacyan, D. **103**, 69
- The Forbidden Oxygen Lines in Comets
Festou, M.C., Feldman, P.D. **103**, 154
- Hydrogen Line Spectrum in Quasars. I. Approximation Procedures for Line Transfer Versus an Exact Treatment
Collin-Souffrin, S., Delache, P., Dumont, S., Frisch, H. **104**, 264
- Hydrogen Line Spectrum in Quasars. II. A Critical Discussion of Model Calculations for the Broad Line Region
Collin-Souffrin, S., Dumont, S., Tully, J. **106**, 362
- On the Possibility of Observing Iron Line Emission from the Surface of Magnetized Neutron Stars
Yahel, R.Z. **109**, 1
- Angle-averaged Redistribution Function in the Laboratory Frame
Seitz, M., Baschek, B., Wehrse, R. **109**, 10
- On the Widths of the Ca II K Emission in Late-type Stars
Severino, G. **109**, 90
- Spectral Line Formation in YY Orionis Envelopes: A Multi-level Hydrogen Atom
Bastian, U. **109**, 245
- Non-LTE Resonance Line Polarization with Partial Redistribution Effects
Rees, D.E., Saliba, G.J. **115**, 1
- Empirical NLTE Analyses of Solar Spectral Lines. III. Iron Lines Versus LTE Models of the Photosphere
Rutten, R.J., Kostik, R.I. **115**, 104
- A Study of Ultraviolet Spectra of ζ Aur/VV Cep Systems. I. Resonance Line Formation
Hempe, K. **115**, 133
- Empirical NLTE analyses of solar spectral lines. IV. The Fe I curve of growth
Rutten, R.J., Zwaan, C. **117**, 21
- A linearization method for solving partial redistribution problems
Scharmer, G.B. **117**, 83
- The asymmetry of photospheric absorption lines. II. The asymmetry of medium-strong Fe I lines in quiet and active regions of the Sun
Kaisig, M., Schröter, E.H. **117**, 305
- HCN $J=1-0$ observations in L 673 and S 235B: two different cases of hyperfine anomalies
Sandell, G., Höglund, B., Kislyakov, A.G. **118**, 306
- Spectral line profiles from spherical shells
Wagenblast, R., Bertout, C., Bastian, U. **120**, 6
- The ratio of deuterium to hydrogen in interstellar space. V. The line of sight to ϵ Persei
Vidal-Madjar, A., Laurent, C., Gry, C., Bruston, P., Ferlet, R., York, D.G. **120**, 58
- The Mg II h and k lines in Vega
Freire Ferrero, R., Gouttebroze, P., Kondo, Y. **121**, 59
- OSO-8 observations of a quiescent prominence: a comparison of Lyman- α with theoretical intensities
Heinzel, P., Vial, J.-C. **121**, 155
- Observations of the MG II λ 2800 spectral region in broad absorption line quasars
Wampler, E.J. **122**, 54
- An interpretation of the low energy γ -ray emission from Seyfert nuclei in terms of annihilation radiation from a hot plasma
Bassani, L., Dean, A.J. **122**, 83
- A study of ultraviolet spectra of ξ Aur/VV Cep systems. III. Atlas of theoretical curves of growth
Hempe, K. **126**, 220; **53**, 339
- Composite models for the narrow emission line region of active galactic nuclei. I. The infalling filament
Contini, M., Aldrovandi, S.M.V. **127**, 15
- Ca II K emission diagnostics. I. The widths and the strengths in a one-dimensional model
Marmolino, C., Severino, G. **127**, 33
- Stark broadening of hydrogen lines: new results for the Balmer lines and astrophysical consequences
Stehlé, C., Mazure, A., Nollez, G., Feautrier, N. **127**, 263
- Line Identification**, see also Atomic Data
- Forbidden Transitions in the C I Sequence
Nussbaumer, H., Rusca, C. **72**, 129
- Do They Observe Objects with Large Violet Shifts?
Putsil'nik, S.A. **78**, 248
- Absorption Line Wavelengths and Equivalent Widths for the Extreme Helium-rich Star HD 168476
Lynas-Gray, A.E., Walker, H.J. **100**, 332; **44**, 349
- The Spectra of Late-type Dwarfs and Sub-dwarfs in the Near Ultraviolet. I. Line Identifications
Beckman, J.E., Crivellari, L., Selvelli, P.L. **106**, 380; **47**, 295

Radio searches for additional interstellar molecules

Hollis, J.M., Suenram, R.D., Lovas, F.J., Snyder, L.E. **126**, 393

Line Profiles

Interferometric Observations of the Interstellar Mg I Line Structures of ζ Ori in the Balloon UV

Bates, B., Coll, R.F., Giaretta, D.L., McCartney, D.J., McKeith, C.D., McQuoid, J.A., Noble, S. **McC. 71**, L22

Line Profiles in Expanding Envelopes

Surdej, J. **73**, 1

The Effect of Waves on Spectral Line Analysis in the Fourier Domain

Durrant, C.J. **76**, 208

H₂ Profile Variability in κ Orionis, B 0.5 Ia

Stalio, R., Rusconi, L., Sedmak, G., Arpigny, C., Georgelin, Y., Rocca, B. **77**, L10

High Resolution Profiles in A-type Stars. III. Vega C II and Si II UV Lines Observed with the Copernicus Satellite

Freire, R. **78**, 148

Luminosity Distribution and Shape of the Hyades Cluster

Oort, J.H. **78**, 312

An Investigation of the Solar Na D Line Observations

Tomley, L. **81**, 95

High Resolution Profiles in A Type Stars. II. The Ca II K Line in Sirius

Griffin, R., Griffin, R. **82**, 385

On the Retrieval of Velocity Gradients from Photospheric Line Asymmetries: A Linearized Approach

Caccin, B., Marmolino, C. **83**, 73

Some More Effects of Waves on Spectral Line Analysis

Durrant, C.J. **89**, 80

Correlations Between Line-profile and Photometric Variations in the B 2 IV [e] Star HD 45677

Swings, J.P., Barbier, R., Klutz, M., Surdej, A., Surdej, J. **90**, 116

Absolute Fluxes, Equivalent Width and Centre-to-limb Profiles of the Solar Mg II Resonance Lines (I)

Greve, A., McKeith, C.D. **90**, 224

The Formation of the Mg II Resonance Line Wings in the Solar Atmosphere (II)

Greve, A. **90**, 231

Profile of a Line Emitted by an Accretion Disk. Influence of the Geometry upon its Shape Parameters

Gerbal, D., Pelat, D. **95**, 18

Interpretation of Emission Line Profiles of Rotating Shells

Pöllitsch, G.F. **97**, 175

Photoelectric Scanner Measurements of Balmer Emission Line Profiles for Southern Be stars. II. A Survey for Variations

Dachs, J., Eichendorf, W., Schleicher, H., Schmidt-Kaler, Th., Stift, M., Tüg, H. **97**, 417; **43**, 427

Ca II H and K Chromospheric Emission in F- and G-type Stars

Dravins, D. **98**, 367

On the Width and Profile of Nuclear Emission Lines in Galaxies

Véron, M.P. **100**, 12

The Third Central Moment of Photospheric Lines as a Measure of Velocity Gradients and Line Shifts

Marmolino, C., Severino, G. **100**, 191

Absorption Feature Observed on the H Lyman-alpha Solar Line: an Interpretation

Artzner, G., Cazes, S., Emerich, C., Vial, J.C., Lemaire, P. **100**, 205

Line Widths in Peculiar Emission Line Objects

Swings, J.P., Andrillat, Y. **103**, L3

Line Profiles and Magnetic Field in Penumbra Fine Structures

Stellmacher, G., Wiehr, E. **103**, 211

"P Cygni" Profiles in P Cygni

Goldberg, L. **104**, L7

The Geometry of the Seyfert Nucleus in NGC 4151 Revisited. I. Cloudy Structure from the [O III] Line Profile Analysis

Pelat, D., Alloin, D. **105**, 335

Absorption Line Symmetries for Two HgMn Stars

Rice, J.B., Wehlau, W.H. **106**, 7

On the Ionization and Velocity Structure of Expanding Circumstellar Envelopes

Drechsel, H., Rahe, J. **106**, 70

Profiles of [O III] Lines in QSOs

Miley, G.K., Heckman, T.M. **106**, 163

A Model for Constructing Artificial Integrated Spectral Lines and Their Fourier Transform Properties Relevant to the Search for Differential Rotation of Stars

Garcia-Alegre, M.C., Vázquez, M., Wöhl, H. **106**, 261

An Atlas of Theoretical Stokes Profiles for Solar Disk Observations

Arena, P., Landi Degl'Innocenti, E. **108**, 416; **48**, 81

Study of H₂ Profile in 72 Be Stars

Andrillat, Y., Fehrenbach, Ch. **108**, 416; **48**, 93

Absolute Measurement of the Bisector of the 6301.5091 Fe I Line in the Solar Spectrum

Cavallini, F., Ceppatelli, G., Righini, A. **109**, 233

Spectral Line Formation in YY Orionis Envelopes: A Multi-level Hydrogen Atom

Bastian, U. **109**, 245

Solar Emission Lines Produced in the Wake of a Shock Wave. II. Line Profiles

Flower, D.R., Pineau des Forêts, G. **110**, 163

Velocity Fields and Spectral Line Asymmetries: A Linearized Analytical Approach to the Theory of the Line Bisector in a Milne-Eddington Atmosphere

Buonaura, B., Caccin, B. **111**, 113

High Resolution Observations of the H₂ Profile from η Car

Melnick, J., Ruiz, M.T., Maza, J. **111**, 375

On the Balmer Emission Lines of the Herbig Be Star HD 200775

Köppen, J., Finkenzeller, U., Mundt, R., Beltrametti, M. **112**, 174

Line Profile Fluctuations in a Turbulent Atmosphere

Loucif, M.L., Magnan, C. **112**, 287

Spectral Line Transfer Effects in Lambdameter Measurements of Solar Short-period Oscillations

Deubner, F.-L., Durrant, C.J., Kaltenbacher, J. **114**, 85

Cyclotron Emission in Strongly Magnetized Plasmas

Herold, H., Ruder, H., Wunner, G. **115**, 90

A Note on Garcia-Alegre et al.'s Article, "A Model for Constructing Artificial Integrated Spectral Lines and Their Fourier Transform Properties Relevant to the Search for Differential Rotation of Stars"

Bruning, D.H. **115**, 203

Asymmetric Emission-line Regions with Out-flowing Mass in QSOs and the $Z_{ab} > Z_{em}$ Systems

Goldman, I., Bahcall, J.N. **115**, 242

The Asymmetry of Photospheric Absorption Lines. I. An Analysis of Mean Solar Line Profiles

Kaisig, M., Durrant, C.J. **116**, 332

Profiles and shifts of the C I 5052-Å line in the granulation spectrum

Namba, O., Hafkenscheid, G.A.M., Koyama, S. **117**, 277

The asymmetry of photospheric absorption lines. II. The asymmetry of medium-strong Fe I lines in quiet and active regions of the Sun

Kaisig, M., Schröter, E.H. **117**, 305

Spectral line profiles from spherical shells

Wagenblast, R., Bertout, C., Bastian, U. **120**, 6

The Mg II h and k lines in Vega

Freire Ferrero, R., Gouttebroze, P., Kondo, Y. **121**, 59

Half-widths of neutral fluorine spectral lines

Vujnović, V., Vadla, Č., Lokner, V., Dimitrijević, M.S. **123**, 249

Hydrogen line broadening in the presence of a magnetic field with the unified classical path theory

Mathys, G. **125**, 13

ESO 438-G 9: a Seyfert galaxy with unusual properties

Kollatschny, W., Fricke, K.J. **125**, 276

Second catalogue of H α line profiles in 55 Be star spectra

Andrillat, Y. **126**, 220; **53**, 319

On the line profile coefficient for stimulated emission

Cooper, J., Hubeny, I., Oxenius, J. **127**, 224

Stark broadening of hydrogen lines: new results for the Balmer lines and astrophysical consequences

Stehlé, C., Mazure, A., Nollez, G., Feautrier, N. **127**, 263

Lithium Depletion, see abundances, stellar

Upper Limits for the Li/Na Ratio in Novae

Friedjung, M. **77**, 357

Galactic evolution of the lithium isotopes

Audouze, J., Boulade, O., Malinie, G., Poilane, Y. **127**, 164

Local Group, see also M 31, Magellanic Clouds

Comparison of the Rates of Formation of Massive Stars and of the Initial Mass Functions in Galaxies of the Local Group

Lequeux, J. **71**, 1

A Photoelectric Sequence in the Region of the Sculptor Galaxy NGC 55

Alcaino, G. **84**, 354

Wolf-Rayet Stars in Extragalactic H II Regions: Discovery of a Peculiar WR in IC 1613/ 3

D'Odorico, S., Rosa, M. **105**, 410

On the Peculiar Motion of the Local Group as Revealed by the *B-V* vs. *HM* Relation for ScI Galaxies

Teerikorpi, P. **109**, 314

Discovery of an S star in the Fornax dwarf elliptical galaxy

Westerlund, B.E. **118**, L5

Long-Period Variables, see Mira Stars

Luminosity Calibration, ... Funktion

A Westerbork Survey of Rich Clusters of Galaxies. VIII. Observations of the Cluster Abell 1367 at 610 and 1415 MHz

Gavazzi, G. **72**, 1

A Westerbork Survey of Rich Clusters of Galaxies. IX. The Radio Luminosity Function of the Hercules Supercluster at 610 MHz

Perola, G.C., Valentijn, E.A. **73**, 54

The Luminosity Function of Seyfert I Galaxy Nuclei and BL LAC Objects, and the X-ray Background

Véron, P. **78**, 46

Luminosity and T_{eff} Determinations for B-type Stars

Cramer, N., Maeder, A. **78**, 305

A Photometric Disk Model of the Milky Way. I. Direct Starlight Intensities and Effect of Clumping

Caplan, J., Grec, G. **78**, 335

A Detailed Photometric and Structural Study of the Southern Cluster of Galaxies CA 0340-538

Quintana, H., Havlen, R.J. **79**, 70

Spectral Index Dependent Properties of Steep Spectrum Radio

Blumenthal, G., Miley, G. **80**, 13

Non-parametric Elimination of the Observational Magnitude Cutoff Bias

Nicoll, J.F., Segal, I.E. **82**, L3

About the Consistency of Absolute Luminosity Calibrations

Heck, A. **82**, 370

A Westerbork Survey of Rich Clusters of Galaxies.

XII. Observations of A 2197 and A 2199 at 610 MHz

Gavazzi, G., Perola, G.C. **84**, 228

A Westerbork Survey of Rich Clusters of Galaxies. XI. Observations of the Cancer Cluster at 610 MHz

Perola, G.C., Tarengi, M., Valentijn, E.A. **84**, 245

A Sample of Very Faint Ultraviolet Excess Objects in the 13^h + 36^o Field. II. A Discussion of the Number-magnitude Relation of Optically Selected Quasars and a New Determination...

Braccesi, A., Zitelli, V., Biondi, F., Formigini, L. **85**, 80

Stellar Studies in the Large Magellanic Cloud. IV. Luminosity Function for the Bright Stars and Comparison to the Galactic Luminosity Function

Lequeux, J., Martin, N., Prévot, L., Prévot-Burnichon, M.L., Rebeiro, E., Rousseau, J. **85**, 305

The Mass Distribution of Stars and the Weibull Statistical Function

Hughes, D.W. **87**, 136

The Radio Luminosity Function of Spiral Galaxies: Correlations with Aggregation and Hubble Type

Gavazzi, G., Trinchieri, G. **97**, 128

Theoretical Luminosity Functions of Red and Black Dwarfs

Staller, R.F.A., de Jong, T. **98**, 140

Preliminary Stellar Photographic Photometry in the Sculptor Dwarf Irregular Galaxy (SDIG)

Lequeux, J., West, R.M. **103**, 319

[O III]/H β Ratios of Emission Regions in the Arms and Disk of M 33 and Luminosity Functions at the Fronts of the Arms

Boulesteix, J., Dubout-Crillon, R., Monnet, G. **104**, 15

The Luminosity Function of Virgo Cluster Galaxies

Kraan-Korteweg, R.C. **104**, 280

Radio and Optical Observations of 9 Nearby Abell Clusters: A262, A347, A569, A576, A779, A1213, A1228, A2162, A2666

Fanti, C., Fanti, R., Feretti, L., Ficarra, A., Gioia, I.M., Giovanini, G., Gregorini, L., Mantovani, F., Marano, B., Padrielli, L. **105**, 200

Membership, Basic Parameters and Luminosity Function of the Southern Open Cluster NGC 2547

Clariá, J.J. **106**, 380; **47**, 323

Optical Identification/Flux Density Relationship for Radio Galaxies

Swarup, G., Subrahmanya, C.R., Venkatakrishna, K.L. **107**, 190

Luminosity Functions of Star Clusters in the Small Magellanic Clouds

Kontizas, M., Kontizas, E. **108**, 344

The Log N-log S Curve of Gamma-ray Bursts Detected by the SIGNE Experiments

Barat, C., Chambon, G., Hurley, K., Niel, M., Vedrenne, G. **109**, L9

The Initial Mass Function for Young Open Clusters

Tarrab, I. **109**, 285

RGU-photometry of the Field Vela II

Becker, W., Marsoglu, A. **112**, 133

The Mass Function of Blue Stars, the Production Rate of Lyc-photons, and the Rate of Star Formation in M 33

Berkhuijsen, E.M. **112**, 369

Evolutionary Luminosity Functions of Extragalactic Sources Driven by Gravitational Power

Cavaliere, A., Giallongo, E., Messina, A., Vagnetti, F. **114**, L1

RGU-three Colour Photometry of a Field near NGC 6171 (Text in German)

Wiedemann, D. **114**, 421; **50**, 93

On the Difference Between the Initial Mass Function of Single Stars and of Primaries of Binaries

Vanbeveren, D. **115**, 65

An optimal procedure for non-parametric elimination of observational cutoff bias in complete samples

Nicoll, J.F., Segal, I.E. **118**, 180

Mass function for massive stars

Bisacchi, G.F., Firmani, C., Sarmiento, A.F. **119**, 167

RGU photometry in a field of the Galactic Bulge

Spaenhauer, A.M., Topaktas, L., Fenkart, R.P. **119**, 326; **51**, 533

The absolute masses of 72 galactic clusters and 12 OB associations

Bruch, A., Sanders, W.L. **121**, 237

Mass-luminosity relation and initial mass function at the faint end of the main sequence. Is there a real deficit of very low-mass stars?

D'Antona, F., Mazzitelli, I. **127**, 149

Lunar . . . , see Moon

Lunar Occultation, see Occultation

M Stars

TiH in M-type Stars and Sunspots

Yerle, R. **73**, 346

On the Rotational Excitation Temperature of M-type Stars

Yerle, R. **73**, 352

Dwarf-M Stars as a Source of He³ in the Interstellar Medium

Shlosman, I., Kozlovsky, B.Z., Shaviv, G. **73**, 358

A New Method for Deriving Space Densities of Stars

Ochsenbein, F. **86**, 321

The IR silicate features as a measure of grain size in circumstellar dust

Papoular, R., Pégourié, B. **128**, 335

M 31, see Galaxies, individual

The Bulge of M 31: Velocity Dispersions and Dynamical Model

Simien, F., Pellet, A., Monnet, G. **72**, 12

A Model for the Orientation of M 31

Henderson, A.P. **75**, 311

A Peculiar Nova in M 31

Dopita, M.A., Rosino, L., D'Odorico, S. **76**, 240

Photoelectric Surface Photometry of the Andromeda Nebula

Hoessel, J.G., Melnick, J. **84**, 317

A Complete, High-sensitivity 21-cm Hydrogen Line Survey of M31

Cram, T.R., Roberts, M.S., Whitehurst, R.N. **85**, 266; **40**, 215

A UV Image of M 31

Deharveng, J.M., Jakobsen, P., Milliard, B., Laget, M. **88**, 52

Search for (Globular) Clusters in M 31. I.: Candidates in a 70' Square Field Centered on M 31

Battistini, P., Bonoli, F., Braccisi, A., Fusi Pecci, F., Malagnini, M.L., Marano, B. **92**, 325; **42**, 357

A Complete CO Map of a Spiral Arm Region in M 31

Boulanger, F., Stark, A.A., Combes, F. **93**, L1

NGC 206, a Hole in M 31

Brinks, E. **95**, L1

The Extended Radio Continuum Emission Around M31

Gräve, R., Emerson, D.T., Wielebinski, R. **98**, 260

A "Symmetrical" Kinematical Model for Elliptical Galaxies. Application to the Edge on Bulge of M 31

Monnet, G., Rosado, M. **102**, 175

Magellanic Clouds, see also Local Group

The Interstellar λ 4428 Feature in the Large Magellanic Cloud

Blades, J.C., Madore, B.F. **71**, 359

A Deep Objective Prism Survey of the Two Regions in the Large Magellanic Cloud for OB and Supergiant Stars

Davis Philip, A.G., Sanduleak, N. **72**, 379; **35**, 347

Small Magellanic Cloud, Additional Lists of Probable Members and Foreground Stars

Azzopardi, M., Vigneau, J. **72**, 380; **35**, 353

Balmer Line Photometry of the 30 Doradus Nebula

Strauss, F.M., Braz, M.A., Ducati, J.R. **74**, 280

UBV Photometry of SMC X-2

Schlosser, W., Paradijs, J. van **75**, 112

A Search for New Wolf-Rayet Stars in the Small Magellanic Cloud

Azzopardi, M., Breysacher, J. **75**, 120

Faint, Nebulous Filaments, 2000 pc Diameter, around the 30 Doradus Nebula

Meaburn, J. **75**, 127

New Wolf-Rayet Stars in the Large Magellanic Cloud

Azzopardi, M., Breysacher, J. **75**, 243

A Catalogue of Radial Velocities in the Large Magellanic Cloud

Feitzinger, J.V., Weiss, G. **76**, 370; **37**, 575

A Comparison of the Star Density Distribution of "Red and Blue" Globular Clusters of the Large Magellanic Cloud

Geyer, E.H., Hopp, U., Kiehl, M., Witzigmann, S. **77**, 61

On the Spectrographic and Photometric Data for the Brightest Stars in the Small Magellanic Cloud

Ardeberg, A., Maurice, E. **77**, 269

Structure and Kinematics of the Small Magellanic Cloud as Outlined by Its Brightest Stars

Ardeberg, A., Maurice, E. **77**, 277

Long Time Baseline *VBLUW* Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757, and HDE 269006 (I)

van Genderen, A.M. **78**, 249; **38**, 151

Photoelectric Photometry in the Large Magellanic Cloud

Isserstedt, J. **78**, 250; **38**, 239

High Luminosity Stars. I. *UBV* Intrinsic Colors

Dubois, P. **79**, 143

Long Time Baseline *VBLUW* Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757 and HDE 269006 (II)

van Genderen, A.M. **80**, 330; **38**, 381

More Wolf-rayet Stars in the Large Magellanic Cloud

Azzopardi, M., Breysacher, J. **81**, 387; **39**, 19

Birthrate and Mass Function in the Magellanic Clouds

Dennefeld, M., Tammann, G.A. **83**, 275

The Ratio between Total and Selective Absorption in the Small Magellanic Cloud

Isserstedt, J. **83**, 322

The Object R 136 in the Gas Nebula 30 Doradus: Structure, Color, Mass and Excitation Parameter

Feitzinger, J.V., Schlosser, W., Schmidt-Kaler, Th., Winkler, Chr. **84**, 50

The Nature of the Core of the 30 Doradus Nebula from New Optical Observations

Cantó, J., Elliott, K.H., Goudis, C., Johnson, P.G., Mason, D., Meaburn, J. **84**, 167

Conditions around the Large Magellanic Cloud Emission Line Star S22

Friedjung, M., Muratorio, G. **85**, 233

Preliminary Colour-magnitude Diagrams of 20 Star Clusters and Their Adjoining Fields in the Small Magellanic Cloud

Kontizas, M. **85**, 265; **40**, 151

Stellar Studies in the Large Magellanic Cloud. IV. Luminosity Function for the Bright Stars and Comparison to the Galactic Luminosity Function

Lequeux, J., Martin, N., Prévot, L., Prévot-Burnichon, M.L., Rebeiro, E., Rousseau, J. **85**, 305

Ultraviolet Studies of the Magellanic Clouds. I. Observations

Maucherat-Joubert, M., Lequeux, J., Rocca-Volmerange, B. **86**, 299

The Nature, Distribution and Evolution of Stellar Populations in the Small Magellanic Cloud

Brück, M.T. **87**, 92

IUE and Ground Based Observations of the LMC Star S Doradus

Wolf, B., Appenzeller, I., Cassatella, A. **88**, 15

Etude de quelques amas faibles du Grand Nuage de Magellan

Martin, N., Rousseau, J. **88**, 283; **41**, 219

The Dynamics of the Giant Filamentary Shell, N 51 D, in the LMC

Meaburn, J., Terrett, D.L. **89**, 126

Highly Ionized Species in the Spectra of Small Magellanic Cloud Stars

Prévot, L., Laurent, C., Paul, J., Vidal-Madjar, A., Audouze, J., Ferlet, R., Lequeux, J., Maucherat-Joubert, M., Prévot-Burnichon, M.L., Rocca-Volmerange, B. **90**, L13

Ultraviolet Studies of the Magellanic Clouds. II. Internal Extinction, Formation of Massive Stars, Comparison with Other Galaxies

Vangioni-Flam, E., Lequeux, J., Maucherat-Joubert, M., Rocca-Volmerange, B. **90**, 73

New Photoelectric Observations of the Wolf-Rayet Star HD 5980 in the Small Magellanic Cloud

Breysacher, J., Perrier, C. **90**, 207

Photoelectric Photometry of Stars in the Small Magellanic Cloud

Ardeberg, A. **91**, 261; **42**, 1

The Most Massive Stars in the Galaxy and the LMC: Quasi-homogeneous Evolution, Time-averaged Mass Loss Rates and Mass Limits

Maeder, A. **92**, 101

Spectral Classification of Wolf-Rayet Stars in the Large Magellanic Cloud

Breysacher, J. **93**, 394; **43**, 203

Evolution of Massive Stars with Low Metal Abundance Holding for the Magellanic Clouds

Hellings, P., Vanbeveren, D. **95**, 14

Spectroscopy of the Small Magellanic Cloud Emission Line Star HENS 18

Azzopardi, M., Breysacher, J., Muratorio, G. **95**, 191

Comparison of the Spectrophotometric Data of Two FeII Emission Line Stars

Muratorio, G. **95**, 210; **43**, 111

Five-colour Photometry of Blue Stars in the Magellanic-cloud Region

Wamsteker, W. **95**, 210; **43**, 127

Spectral Classification of Wolf-Rayet Stars in the Large Magellanic Cloud

Breysacher, J. **95**, 394; **43**, 203

Supergiant and Giant M Type Stars in the Large Magellanic Cloud

Westerlund, B.E., Olander, N., Hedin, B. **95**, 395; **43**, 267

Aspects of the Structure of the Small Magellanic Cloud

Florsch, A., Marcout, J., Fleck, E. **96**, 158

Kinematics of Ring-shaped Nebulae in the LMC. I. The Radial Velocity Field of N 70

Rosado, M., Georgelin, Y.P., Georgelin, Y.M., Laval, A., Monnet, G. **97**, 342

UV and Optical Observations of X-ray Sources in the Magellanic Clouds

Tarengi, M., Tanzi, E.G., Treves, A., Glencross, W.M., Howarth, I.D., Hammerschlag-Hensberge, G., Van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., Whitelock, P.A. **97**, 415; **43**, 353

Stochastic Self-propagating Star Formation in the Large Magellanic Cloud

Feitzinger, J.V., Glassgold, A.E., Gerola, H., Seiden, P.E. **98**, 371

A Photometric Determination of the Metal Content for Cepheids in the Small Magellanic Cloud

Pel, J.W., van Genderen, A.M., Lub, J. **99**, L1

Ultraviolet Extinction in the Small Magellanic Cloud

Rocca-Volmerange, B., Prévot, L., Ferlet, R., Lequeux, J., Prévot-Burnichon, M.L. **99**, L5

Spectroscopic Identification of White Dwarfs in Galactic Clusters. I. NGC 2287 and NGC 2422

Koester, D., Reimers, D. **99**, L8

R 81: P Cygni of the LMC

Wolf, B., Stahl, O., de Groot, M.J.H., Sterken, C. **99**, 351

Ultraviolet Observations of LMC X-4 and SMC X-1

Bonnet-Bidaud, J.M., Ilovaisky, S.A., Mouchet, M., Hammerschlag-Hensberge, G., van der Klis, M., Glencross, W.M., Willis, A.J. **101**, 184

A CH Star in the Direction of LMC

Fehrenbach, Ch., Duflot, M. **101**, 226

HV 1369, a Cepheid at a Possible Depth of 32 Kpc in the Small Magellanic Cloud

van Genderen, A.M. **101**, 289

Radial Velocities for Different Spectral Lines of B and A Supergiants in Our Galaxy and in the Large Magellanic Cloud

Kontizas, E., Kontizas, M. **101**, 420; **45**, 121

Multiplicity and Absolute Magnitudes of Wolf-Rayet Stars in the Large Magellanic Cloud

Prévot-Burnichon, M.L., Prévot, L., Rebeiro, E., Rousseau, J., Martin, N. **103**, 83

IUE and Ground-based Spectroscopic Observations of the S Dor-type LMC Variable R 71 during Minimum State

Wolf, B., Appenzeller, I., Stahl, O. **103**, 94

Detailed Analysis of a G Supergiant in the Small Magellanic Cloud

Foy, R. **103**, 135

Grand Nuage de Magellan. Troisième Liste D'Etoiles Membres du Grand Nuage de Magellan et Liste D'Etoiles Galactiques

Fehrenbach, Ch., Duflot, M., Duflot, A., Genty, V., Mannone, C. **103**, 207; **49**, 13

UBV Observations of Globular Clusters in the Magellanic Clouds

van den Bergh, S. **103**, 208; **46**, 79

Erratum: R 81: P Cygni of the LMC

Wolf, B., Stahl, O., de Groot, M.J.H., Sterken, C. **103**, 427

Studies of the Magellanic Clouds. III. Colours, Gas and Past Star Formation Rate

Rocca-Volmerange, B., Lequeux, J., Maucherat-Joubert, M. **104**, 177

A Carbon Star in the Globular Cluster Lindsay 102

Danks, A.C. **106**, 4

A Study of Ultraviolet Spectroscopic and Light Variations in the X-ray Binaries LMC X-4 and SMC X-1

van der Klis, M., Hammerschlag-Hensberge, G., Bonnet-Bidaud, J.M., Ilovaisky, S.A., Mouchet, M., Glencross, W.M., Willis, A.J., van Paradijs, J., Zuiderwijk, E.J., Chevalier, C. **106**, 339

The Gas to Dust Ratio and the Near-infrared Extinction Law in the Large Magellanic Cloud

Koornneef, J. **107**, 247

VBLUW Photometry of Magellanic Cloud Super- and Hypergiants, Made in 1977 up to 1979

van Genderen, A.M., van Leeuwen, F., Brand, J. **107**, 416; **47**, 591

Vibrational Instability of a 3000 M Star and the R 136a Problem

Ledoux, P., Noels, A., Boury, A. **108**, 49

Comparisons of the HR Diagrams of the Youngest Clusters in the Galaxy, the LMC and SMC. Evidence for a Large MS Widening

Meylan, G., Maeder, A. **108**, 148

Luminosity Functions of Star Clusters in the Small Magellanic Clouds

Kontizas, M., Kontizas, E. **108**, 344

Identification of Stars in the Direction of the Large Magellanic Cloud (2nd Serie)

Fehrenbach, C., Duflo, M. **108**, 415; **48**, 1

A 21 cm Hydrogen Line Survey of the Small Magellanic Cloud

Bajaja, E., Loiseau, N. **108**, 415; **48**, 71

Equivalent Width Measurements in Galactic Supergiant and in Small Magellanic Cloud Star Spectra

Dubois, P. **110**, 182; **48**, 375

Radial Velocities from Objective-prism Plates in the Direction of the Large Magellanic Cloud (Text in French)

Fehrenbach, Ch., Duflo, M. **110**, 182; **48**, 409

Dynamics of the Supergiant Shell LMC 2 in the Large Magellanic Cloud

Caulet, A., Deharveng, L., Georgelin, Y.M., Georgelin, Y.P. **110**, 185

High Dispersion Spectroscopy of the LMC Star S Doradus During Maximum Light

Stahl, O., Wolf, B. **110**, 272

On the Radial Colour Variation in Nine Young Populous Clusters in the LMC

Meylan, G. **110**, 348

Excitation and Extinction in the LMC H II Region N159A and Discovery of a Highly Excited "Blob" in Its Vicinity

Heydari-Malayeri, M., Testor, G. **111**, L11

Absolute Photometry of Supernova Remnants and Emission Nebulae in the Galaxy and the Magellanic Clouds

Greve, A., van Genderen, A.M., Dennefeld, M., Danziger, I.J. **111**, 171

Observed Radii and Structural Parameters of Clusters in the SMC

Kontizas, M., Danzeis, E., Kontizas, E. **111**, 209; **49**, 1

Further VBLUW Photometry of the S Doradus Type Variables S Dor and HDE 269006 in the LMC and a Discussion on Their Temperatures

van Genderen, A.M. **112**, 61

The Cepheid Period-Luminosity-Colour Relation: A Most Unsuitable Distance Indicator

Stift, M.J. **112**, 149

R 136: WN or O Spectral Characteristics?

Vreux, J.M., Dennefeld, M., Andriolat, Y. **113**, L10

Sk 143: An SMC Star with a Galactic-type Ultraviolet Interstellar Extinction

Lequeux, J., Maurice, E., Prévot-Burnichon, M.-L., Prévot, L., Rocca-Volmerange, B. **113**, L15

The Bok and Tiffi UVB Sequence in the Large Magellanic Cloud: Revised and Extended

Alcaino, G., Liller, W. **114**, 213

Photoelectric UVB-photometry in the Large Magellanic Cloud (Text in German)

Isserstedt, J. **114**, 419; **50**, 7

Two Photoelectric UVBRI Sequences in the Bar of the Small Magellanic Cloud

Vigneau, J., Azzopardi, M. **114**, 422; **50**, 119

Kinematics of Ring-shaped Nebulae in the LMC. II. The Radial Velocity Field of N 185

Rosado, M., Georgelin, Y.M., Georgelin, Y.P., Laval, A., Monnet, G. **115**, 61

The Two-colour Diagram of Luminous Stars in the Magellanic Clouds (Text in German)

Isserstedt, J. **115**, 97

Fine Structure in High Velocity Clouds Near the South Celestial Pole

Morras, R. **115**, 249

On the photometric differences between luminous OBA type stars in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 53

Catalogue of the Small Magellanic Cloud star members

Azzopardi, M., Vigneau, J. **117**, 171; **50**, 291

The morphology and dynamics of the halo of the 30 Doradus Nebula

Cox, P., Deharveng, L. **117**, 265

Erratum: On the photometric differences between luminous OBA type stars in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 368

Optical observations of the LMC H II region N 11

Heydari-Malayeri, M., Testor, G. **118**, 116

A rediscussion of sulfur abundances in Magellanic Clouds and Galactic H II regions

Dennefeld, M., Stasińska, G. **118**, 234

Four-colour photometry of some globular cluster giants in the Galaxy and the Magellanic Clouds

Richtler, T., Nelles, B. **119**, 75

Detection and BVR photometry of late type stars in the Large Magellanic Cloud

Rebeiro, E., Martin, N., Mianes, P., Prévot, L., Robin, A., Rousseau, J., Peyrin, Y. **119**, 165; **51**, 277

A discussion on the reddening of long period Cepheids in the Magellanic Clouds

van Genderen, A.M. **119**, 192

Photoelectric UVB-photometry of Wolf-Rayet stars in the Large Magellanic Cloud

Feitzinger, J.V., Isserstedt, J. **119**, 326; **51**, 505

The ultraviolet spectrum of the supermassive object R 136 a. I. The mass loss rate

Feitzinger, J.V., Hanuschik, R.W., Schmidt-Kaler, T. **120**, 269

R 66 (Aeq): an LMC B supergiant with a massive cool and dusty wind

Stahl, O., Wolf, B., Zickgraf, F.-J., Bastian, U., de Groot, M.J.H., Leitherer, C. **120**, 287

- Observed radii and structural parameters of clusters in the SMC.
II
Kontizas, E., Kontizas, M. **121**, 164; **52**, 143
- Considerations arising from the faint absolute magnitude of halo RR Lyrae variables and an error in the Cepheid PLC relation
Clube, S.V.M., Dawe, J.A. **122**, 255
- Stochastic star formation and chemical evolution of dwarf irregular galaxies
Matteucci, F., Chiosi, C. **123**, 121
- VBLUW photometry of Cepheids in the Magellanic Clouds made in 1971-1978
van Genderen, A.M. **123**, 359; **52**, 423
- A far red spectrum of Nova LMC 1981
Andrillat, Y., Dennefeld, M. **124**, 143
- An investigation of faint stars in a region of the Magellanic Stream
Brück, M.T., Hawkins, M.R.S. **124**, 216
- The intrinsic properties of 29 Cepheids in the Magellanic Clouds
van Genderen, A.M. **124**, 223
- R 136: supermassive star or dense core of a star cluster?
Moffat, A.F.J., Seggewiss, W. **125**, 83
- A catalogue of late-type supergiant stars in the Small Magellanic Cloud
Prévot, L., Martin, N., Maurice, E., Rebeiro, E., Rousseau, J. **125**, 176; **53**, 255
- Ellipticity variations within some globular clusters of the Galaxy and the Magellanic Clouds
Geyer, E.H., Hopp, U., Nelles, B. **125**, 359
- The LMC emission line star S22 (= HD 34664). III. Ultraviolet to infrared energy distribution
Bensammar, S., Friedjung, M., Muratorio, G., Viotti, R. **126**, 427
- R 127: an S Dor type variable intermediate between Of and WN
Stahl, O., Wolf, B., Klare, G., Cassatella, A., Krautter, J., Persi, P., Ferrari-Toniolo, M. **127**, 49
- Young stars and bubbles in the Large Magellanic Cloud
Braunsfurth, E., Feitzinger, J.V. **127**, 113
- UV and visible spectrophotometry of nine LMC Wolf-Rayet stars
Smith, L.J., Willis, A.J. **128**, 261; **54**, 229
- Magnetic Field, ... Flux**, see also Dynamo Theory, Hydrodynamics, Magnetohydrodynamics, Peculiar A Stars, Solar Activity
- Concentration of Axisymmetric Magnetic Flux by Rotational Shearing Motions
Nakagawa, Y., Stenflo, J.O. **72**, 67
- Evidence for a Lower Limit of Solar Magnetic Field Strengths
Wiehr, E. **73**, L19
- Steps Towards a Solar Network Model
Unno, W., Ribes, E. **73**, 314
- The Stability of Magnetic Interstellar Clouds
Garlick, A.R. **73**, 337
- Line Formation in an Unresolved Magnetic Element: A Test of the Centre of Gravity Method
Rees, D.E., Semel, M.D. **74**, 1
- On the Magnetic Field in Interstellar Molecular Clouds
Baker, P.L. **75**, 54
- Approximate Formulae for Electron Scattering in a Strong Magnetic Field
Börner, G., Mészáros, P. **77**, 178
- Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. I. The Method
Leroy, B., Bel, N. **78**, 129
- The Inductive Generation of the Magnetic Field in Binary Systems
Dolginov, A.Z., Urpin, V.A. **79**, 60
- A New Main Line OH Maser with a Probable Zeeman Pattern
Wouterloot, J.G.A., Habing, H.J., Herman, J. **81**, L11
- On the Zeeman Splitting of High n Recombination Lines
Greve, A., Pauls, T. **82**, 388
- Accretion by Neutron Stars: Accretion Disk and Rotating Magnetic Field
Anzer, U., Börner, G. **83**, 133
- On the Breaking of the First Adiabatic Invariant in the Magnetic Fields Arising from the Mirror Instability
Hall, A.N. **84**, 40
- The Rotation Measures of Radio Sources and Their Data Processing
Vallée, J.P. **86**, 251
- Quantum Theory of the Hanle Effect II: Effect of Level-crossings and Anti-level-crossings on the Polarization of the D_3 Helium Line of Solar Prominences
Bommier, V. **87**, 109
- The General Dispersion Relation for the Vibration Modes of Magnetic Flux Tubes
Wilson, P.R. **87**, 121
- Flows along Magnetic Flux Tubes. I. Equilibrium and Buoyancy of a Slender Magnetic Loop in the Interior of a Star
Schüssler, M. **89**, 26
- Lyman- and Balmer-like Transitions for the Hydrogen Atom in Strong Magnetic Fields
Wunner, G., Ruder, H. **89**, 241
- Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. II. The Reflection of Alfvén Waves
Leroy, B. **91**, 136
- Magnetic Cycles of Lower Main Sequence Stars
Belvedere, G., Paternò, L., Stix, M. **91**, 328
- Bisymmetric Open-spiral Configuration of Magnetic Fields in the Galaxies M 51 and M 81
Sofue, Y., Takano, T., Fujimoto, M. **91**, 335
- A High-accuracy Optical Polarization Analyser
Semel, M. **91**, 369
- Erratum:* Evidence for a Lower Limit of Solar Magnetic Field Strengths
Wiehr, E. **91**, 377
- Further Observations of the Head-tail Radio Galaxy PKS 2247 + 11
Robertson, J.G. **93**, 113
- On the Origin of the Intergalactic Magnetic Field and of the Radio Halo Associated with the Coma Cluster of Galaxies
Roland, J. **93**, 407
- The Photoionisation of the Hydrogen Atom in Strong Magnetic Fields
Schmitt, W., Herold, H., Ruder, H., Wunner, G. **94**, 194
- Hydrogen Atom in Strong Magnetic Fields: Polynomial Approximations for the Magnetic-field Dependence of the Energy Values
Wunner, G., Ruder, H. **95**, 204
- On the Effective Magnetic Field of an Oblique Rotating Star with an Axisymmetric Magnetic Field
Goossens, M., Martens, L., Gadeyne, L. **95**, 240
- Multifrequency Observations of Very Large Radio Galaxies. III: NGC 315
Willis, A.G., Strom, R.G., Bridle, A.H., Fomalont, E.B. **95**, 250
- Stellar X-ray Emission as a Consequence of Magnetic Activity
Belvedere, G., Chiuderi, C., Paternò, L. **96**, 369
- Magnetic Fields Observed in a Sunspot and Faculae Using 12 Lines Simultaneously
Semel, M. **97**, 75

- Motion of Magnetic Flux Tubes in the Solar Convection Zone and Chromosphere
Spruit, H.C. **98**, 155
- Do Neutron Star Magnetic Fields Decay
Kundt, W. **98**, 207
- Magnetic Braking in Low-mass X-ray Binaries
Verbunt, F., Zwaan, C. **100**, L7
- On the Computation of Constant α Force-free Magnetic Field
Alissandrakis, C.E. **100**, 197
- Determination of the Complete Vector Magnetic Field in Solar Prominences, Using the Hanle Effect
Bommier, V., Leroy, J.L., Sahal-Bréchet, S. **100**, 231
- Magnetic Structure in Cool Stars. I. The Ca II H and K Emission from Giants
Middelkoop, F., Zwaan, C. **101**, 26
- Magnetic Structure in Cool Stars. II. Observational Evidence for Transverse Magnetic Fields
Tinbergen, J., Zwaan, C. **101**, 223
- Magnetic Structure in Cool Stars. III. Ca II H and K Emission and Rotation of Main-sequence Stars
Middelkoop, F. **101**, 295
- Erratum: On the Origin of the Intergalactic Magnetic Field and the Radio Halo Associated with the Coma Cluster of Galaxies
Roland, J. **102**, 142
- Highly Excited OH in W3 (OH)
Baudry, A., Walmsley, C.M., Winnberg, A., Wilson, T.L. **102**, 287
- Line Profiles and Magnetic Field in Penumbral Fine Structures
Stellmacher, G., Wiehr, E. **103**, 211
- Distribution of Galactic Synchrotron Emission. II
Phillipps, S., Kearsey, S., Osborne, J.L., Haslam, C.G.T., Stof-fel, H. **103**, 405
- Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. IV. Alfvén Waves in Sunspot Umbrae
Bel, N., Leroy, B. **104**, 203
- The Structure of the Solar Magnetic Field Below the Photosphere. I. Adiabatic Flux Tube Models
van Ballegooijen, A.A. **106**, 43
- Stability of Toroidal Flux Tubes in Stars
Spruit, H.C., van Ballegooijen, A.A. **106**, 58
- The Magnetic Field in M31
Beck, R. **106**, 121
- Changing Orientation of Dipole and Spin Axes in Binary X-ray Pulsars
Wang, Y.-M., Robnik, M. **107**, 222
- Determination of Physical Parameters in the Radio Source 5C 4.81
Roland, J. **107**, 267
- The Fokker-Planck Equation for the Radiation Transfer in a Strongly Magnetized Plasma
Bonazzola, S. **108**, 19
- An Alternative Derivation of the Line Transfer Equation of an Arbitrarily Polarized Radiation in the Presence of a Magnetic Field, in non-LTE
Mathys, G. **108**, 213
- Onset of Rapid Mass Loss in Cool Giant Stars: Magnetic Field Effects
Mullan, D.J. **108**, 279
- On the Generation of Magnetic Fields in Late-type Stars: A Local Time-dependent Dynamo Model
Robinson, R.D., Durney, B.R. **108**, 322
- An Atlas of Theoretical Stokes Profiles for Solar Disk Observations
Arena, P., Landi Degl'Innocenti, E. **108**, 416; **48**, 81
- On the Possibility of Observing Iron Line Emission from the Surface of Magnetized Neutron Stars
Yahel, R.Z. **109**, 1
- Unstable Poloidal Magnetic Fields in Stars
Van Assche, W., Tayler, R.J., Goossens, M. **109**, 166
- On the Origin of Planetary Nebulae
Nussbaumer, H. **110**, L1
- Expected Broadband Linear Polarization from Cool Stars with Magnetic Structures
Landi Degl'Innocenti, E. **110**, 25
- Preinjection of Cosmic Rays and Magnetic Chemically Peculiar Stars
Havnes, O. **110**, 203
- Diagnostic of Coronal Magnetic Fields from Microwave Polarization Reversal
Bandiera, R. **112**, 52
- Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. V. The Theory of Magneto-Acoustic-Gravity Oscillations
Leroy, B., Schwartz, S.J. **112**, 84
- Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. VI. Application of Magneto-Acoustic-Gravity Mode Theory to the Solar Atmosphere
Schwartz, S.J., Leroy, B. **112**, 93
- Broadband Linear Polarization from Magnetized Stellar Atmospheres. Numerical Tables for the Magnetic Intensification Mechanism
Landi Degl'Innocenti, E., Calamai, G. **112**, 395; **49**, 677
- Magnetic Structure in Cool Stars. VI. Ca II H and K Fluxes from Evolved Stars
Middelkoop, F. **113**, 1
- Geometry of Pulsar Beams: Relative Orientations of Rotation Axis, Magnetic Axis and Line of Sight
Narayan, R., Vivekanand, M. **113**, L3
- The Overshoot Layer at the Base of the Solar Convective Zone and the Problem of Magnetic Flux Storage
van Ballegooijen, A.A. **113**, 99
- Erratum: Stability of Toroidal Flux Tubes in Stars
Spruit, H.C., van Ballegooijen, A.A. **113**, 350
- 3D Models for Self-gravitating, Rotating Magnetic Interstellar Clouds
Dorfi, E. **114**, 151
- Magnetic Field in Solar Prominences Measured with a New Spectrally Scanning Magnetograph
Kim, I.S., Koutchmy, S., Nikolsky, G.M., Stellmacher, G. **114**, 347
- Fine Analysis of the Intermediate Helium-star CPD-46°3093
Groote, D., Kaufmann, J.P., Lange, A. **114**, 420; **50**, 77
- Cyclotron Emission in Strongly Magnetized Plasmas
Herold, H., Ruder, H., Wunner, G. **115**, 90
- The Analysis of Fe XIV 5303 Coronal Emission-line Polarization Measurements
Arnaud, J. **116**, 248
- Cross sections for photo-ionisation and photo-recombination of hydrogenic atoms in strong magnetic fields
Wunner, G., Ruder, H., Herold, H., Schmitt, W. **117**, 156
- Pulsar statistics and two types of pulsars
Huang, J.-H., Huang, K.-L., Peng, Q.-H. **117**, 205

Determination of the time scale of the magnetic moment decay in pulsars

Nowakowski, L.A. **118**, 29

Coulomb bremsstrahlung and cyclotron emissivity in hot magnetized plasmas

Nagel, W., Ventura, J. **118**, 66

Aperture synthesis observations of the 21 cm Zeeman effect

Bregman, J.D., Troland, T.H., Forster, J.R., Schwarz, U.J., Goss, W.M., Heiles, C. **118**, 157

The rotation measures of radio sources in selected celestial zones - the Perseus Arm Window

Vallée, J.P. **118**, 210; **51**, 127

On the stability of toroidal flux tubes in differentially rotating stars

van Ballegooijen, A.A. **118**, 275

MHD wave motion in magnetically structured atmospheres

Rae, I.C., Roberts, B. **119**, 28

Mm- to cm-wavelength time delays in solar burst emission and the effect of varying magnetic field

Costa, J.E.R., Kaufmann, P. **119**, 131

Magnetic alignment of interstellar dust grains for dominating magnetic effects

Cugnon, P. **120**, 156

Early Brans-Dicke axisymmetric universe with magnetic field

Chakravarti, S.P., De, U.K. **121**, 1

The influence of magnetic fields on nova outbursts

Livio, M. **121**, L7

Rise times of horizontal magnetic flux tubes in the convection zone of the Sun

Moreno-Insertis, F. **122**, 241

Interaction of a rotating charged black-hole with a uniform magnetic field

Denardo, G., Treves, A., Vergani, F. **123**, 355

The final state of a solar flare

Norman, C.A., Heyvaerts, J. **124**, L1

Large-scale magnetic field in the Perseus spiral arm

Vallée, J.P. **124**, 147

Catalog of magnetic field measurements

Didelon, P. **124**, 154; **53**, 119

Stellar activity and the period gap in cataclysmic variables

Spruit, H.C., Ritter, H. **124**, 267

Hydrogen line broadening in the presence of a magnetic field with the unified classical path theory

Mathys, G. **125**, 13

The magnetic field of the NGC2024 molecular cloud: detection of OH line Zeeman splitting

Crutcher, R.M., Kazès, I. **125**, L23

Photospheric faculae-III-intensity, and magnetic field mapping of a typical element of the photospheric network

Daras-Papamargaritis, H., Koutchmy, S. **125**, 280

Role of magnetic fields during the stellar collapse and origin of binary pulsars

Pacini, F. **126**, L11

Dependence of MHD turbulence spectra on the velocity field-magnetic field correlation

Grappin, R., Pouquet, A., Léorat, J. **126**, 51

The MHD Kelvin-Helmholtz instability in the solar photosphere

Rae, I.C. **126**, 209

Broadband linear polarization from magnetized stellar atmospheres. II. The influence of damping on net spectral line polarization

Calamai, G., Landi Degl'Innocenti, E. **126**, 220; **53**, 311

Propagation of high frequency waves in strongly magnetized plasmas. Mode ambiguities due to vacuum polarization

Soffel, M., Ventura, J., Herold, H., Ruder, H., Nagel, W. **126**, 251

WSRT observations of elliptical galaxies from the B2 catalogue

Feretti, L., Giovannini, G., Gregorini, L., Parma, P. **126**, 311

Detection of magnetomultipole radiation from neutron stars

Lipunov, V.M. **127**, L1

The circularly polarized Sun at 12.6 cm wavelength

Lang, K.R., Willson, R.F. **127**, 135

Spatial energy spectra of the velocity and magnetic fields in solar active regions

Berton, R. **127**, 140

A survey of the distribution of λ 2.8 cm radio continuum in nearby galaxies. IV. NGC 253

Klein, U., Urbanik, M., Beck, R., Wielebinski, R. **127**, 177

Evolution of pulsar magnetic field axis orientation

Nowakowski, L.A. **127**, 259

Magnetohydrostatics in the polar caps of the γ ray burst sources

Hameury, J.M., Bonazzola, S., Heyvaerts, J., Lasota, J.P. **128**, 369

Magnetic Lines

Blowing up of Two-dimensional Magnetohydrostatic Equilibria by an Increase of Electric Current or Pressure

Heyvaerts, J., Lasry, J.M., Schatzman, M., Witomsky, P. **111**, 104

Magnetic braking and tidal energy dissipation in close binaries

Verbunt, F., Hut, P. **127**, 161

Magnetic Stars, see Neutron Stars, Peculiar A Stars

The IR-excess of Helium-variable Stars

Groote, D., Hunger, K., Schultz, G.V. **83**, L5

The Splitting of Non-radial Modes of Oscillation in Rotating Magnetic Stars

Moss, D. **85**, 135

On Dynamos in the Cores of Magnetic Stars

Moss, D. **91**, 319

Element Stratification in the Atmospheres of Main Sequence Stars: The Silicon Accumulation

Alecian, G., Vauclair, S. **101**, 16

The influence of magnetic fields on nova outbursts

Livio, M. **121**, L7

Magnetohydrodynamics, see also Hydrodynamics

The Energy Spectrum of Electrons Accelerated by Weak Magnetohydrodynamic Turbulence

Achterberg, A. **76**, 276

Families of Long Periodic Solutions for the Perturbed Störmer Problem

Klimopoulos, S., Zagouras, C.G. **77**, 371; **38**, 1

Magnetogasdynamics of Double Radio Sources

Nepveu, M. **79**, 40

Magnetohydrodynamic Instabilities and Electron Acceleration in Extended Extragalactic Radio Sources

Ferrari, A., Trussoni, E., Zaninetti, L. **79**, 190

A Magnetohydrodynamical Supernova Model

Müller, E., Hillebrandt, W. **80**, 147

On the Multiple Explosion Picture of Extended Radio Galaxies

Nepveu, M. **81**, 78

Properties of Magnetohydrodynamic Turbulence in the Solar Wind

Dobrowolny, M., Mangeney, A., Veltri, P. **83**, 26

Plasma Flow along Sheared Magnetic Arches within the Solar Corona

Glencross, W.M. **83**, 65

The General Dispersion Relation for the Vibration Modes of Magnetic Flux Tubes

Wilson, P.R. **87**, 121

Non-linear Interaction of Alfvén Waves with Compressive Fast Magnetosonic Waves

Lacombe, C., Mangeney, A. **88**, 277

Structure of Molecular Clouds. III. Effects of MHD Waves in Collapsing Fragments

Morfill, G.E., Stenholm, L.G. **90**, 134

Steady Flow Models of Dark Filaments

Ribes, E., Unno, W. **91**, 129

Equations for Thin Flux Tubes in Ideal MHD

Spruit, H.C. **102**, 129

Alfvénic Fluctuations as Asymptotic States of MHD Turbulence

Grappin, R., Frisch, U., Léorat, J., Pouquet, A. **105**, 6

Solar Type I Noise Storms and Newly Emerging Magnetic Flux

Spicer, D.S., Benz, A.O., Huba, J.D. **105**, 221

Unstable Poloidal Magnetic Fields in Stars

Van Assche, W., Tayler, R.J., Goossens, M. **109**, 166

Blowing up of Two-dimensional Magnetohydrostatic Equilibria by an Increase of Electric Current or Pressure

Heyvaerts, J., Lasry, J.M., Schatzman, M., Witomsky, P. **111**, 104

The Thermal Stability of Solar Coronal Loops in Hydrostatic Equilibrium

Wragg, M.A., Priest, E.R. **113**, 269

Coronal Loop Transients in Streamer Configurations

Steinolfson, R.S. **115**, 39

Coronal Response to a Solar Event in a Corona Evacuated by a Prior Transient

Steinolfson, R.S. **115**, 50

Current sheet models for solar prominences. I. Magnetohydrostatics of support and evolution through quasi-static models

Malherbe, J.M., Priest, E.R. **123**, 80

Determination of physical parameters in extragalactic radio jets from large scale, small amplitude oscillations

Ferrari, A., Trussoni, E., Zaninetti, L. **125**, 179

Dependence of MHD turbulence spectra on the velocity field-magnetic field correlation

Grappin, R., Pouquet, A., Léorat, J. **126**, 51

Current sheet models for solar prominences. II. Energetics and condensation process

Malherbe, J.M., Priest, E.R., Forbes, T.G., Heyvaerts, J. **127**, 153

Magnitudes, see also under the different Objects, especially Clusters, globular and open

Extension of Two *UBV* Magnitude Sequences in the Selected Areas 82 and 107 by Electronography

Purgathofer, A. **73**, 365; **36**, 79

The Colours, Magnitudes and Parallaxes of the Nearby Stars

Grenon, M., Rufener, F. **103**, 208; **46**, 25

Main-Sequence Stars

Ultraviolet Colours of Main-sequence Stars

Wesselius, P.R., van Duinen, R.J., Aalders, J.W.G., Kester, D. **85**, 221

The Fundamental Physical Parameters of Main-sequence and Near Main-sequence B Type Stars as Derived from *uvby*, β Photometry

Sinnerstad, U. **86**, 270; **40**, 395

Differential Rotation Along the Lower Main Sequence: A Theoretical Investigation

Belvedere, G., Paternò, L., Stix, M. **88**, 240

Magnetic Cycles of Lower Main Sequence Stars

Belvedere, G., Paternò, L., Stix, M. **91**, 328

Slightly Detached Binaries as Calibrators of the Main-Sequence

Wilson, R.E., Rafert, J.B. **91**, 380; **42**, 195

IUE MG II Doublet Observations in F and G Main Sequence Stars

García-Alegre, M.C., Ponz, J.D., Vázquez, M. **96**, 17

Theoretical Models of Homogeneous Chromospheres for Main Sequence Stars

Musielak, Z. **105**, 23

Magnetic Structure in Cool Stars. IV. Rotation and Ca II H and K Emission of Main-sequence Stars

Middelkoop, F. **107**, 31

Comparisons of the HR Diagrams of the Youngest Clusters in the Galaxy, the LMC and SMC. Evidence for a Large MS Widening

Meylan, G., Maeder, A. **108**, 148

The Combined Effect of Mass Loss and Overshooting. II. The Evolution of 10 *M* to 30 *M* Stars During Core Hydrogen Burning

Doom, C. **116**, 308

The detection limits in ground based measurements of stellar microvariability

Deubner, F.-L., Isserstedt, J. **126**, 216

Absolute measurements of flux in the continuum of galactic Wolf-Rayet stars: comparison with main-sequence OB stars.

Hua Chon-Trung, Woo Jong-Ok, Nguyen Huu-Doan **126**, 222; **53**, 407

Manganese Stars, see Peculiar A Stars

Markarian Galaxies, see also Seyfert Galaxies

Spectroscopic and 21-cm Line Investigation of the Clumpy Irregular Galaxy Markarian 296

Casini, C., Heidmann, J., Tarengi, M. **73**, 216

A Search for CO in Markarian and Seyfert Galaxies

Wilson, T.L., Fricke, K.J., Biermann, P. **79**, 245

Radio Continuum Observations of Markarian Galaxies at 1410, 2380, and 5000 MHz

Biermann, P., Clarke, J.N., Fricke, K.J., Pauliny-Toth, I.I.K., Schmidt, J., Witzel, A. **81**, 235

The Group of Galaxies NGC 2805-2814-2820-Markarian 108

Bosma, A., Casini, C., Heidmann, J., van der Hulst, J.M., van Woerden, H. **89**, 345

Mars, see also Planets

Corrections to the Paper "Observations of Mars' Position with the Paris Astrolabe (1975-1976)"

Débarbat, S. **73**, 364; **36**, 9

Observations of Mars with the Astrolabe at Paris Observatory during the Winter 1977-1978

Débarbat, S., Lam, S.K., Texier, P., Tomas, M., Vanhollenbeke, J. **75**, 260; **36**, 399

Observations of Mars Position with the Paris Astrolabe

Débarbat, S. **76**, 368; **37**, 475

Erratum: Additional Information to the Paper "Ephemerides and Position of Mars 1975-1976"

Débarbat, S., Pham Van, J., Sanchez, M. **77**, 370

- Theory of Mars Rotation in Euler Angles
Borderies, N. **82**, 129
- The Motion of Mars: 1751-1969
Laubscher, R.E. **82**, 392
- Observations photographiques de Mars, de Jupiter et de ses satellites ainsi que de Saturne, effectuées en 1978 à l'astrophysique double de 40 cm de l'Observatoire royal de Belgique
Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **85**, 266; **40**, 249
- Observations de Mars à L'Astrolabe Danjon de San Fernando durant l'hiver 1977-1978
Sánchez, M., Fernández, J.B., Parra, F., Navas, F.J. **88**, 283; **41**, 215
- Mars around 1975 and 1978 Oppositions
Débarbat, S., Sanchez, M. **96**, 193
- Astrolabe Observations of Mars
Standish, E.M., Débarbat, S., Sanchez, M. **102**, 371
- Observations of Mars with the Astrolabe of the CERGA Observatory (February 1980 - May 1980) (Text in French)
Pham-Van, J., Dudognon, G., Granès, P., Mignard, F., Vigouroux, G. **111**, 211; **49**, 105
- Surface Marking Variations of Selected Areas on Mars
de Mottoni y Palacios, G., Dollfus, A. **116**, 323
- The surface texture of the Martian soil from the Soviet spacecraft Mars-5 photopolarimeters
Dollfus, A., Deschamps, M., Ksanfomaliti, L.V. **123**, 225
- Maser**, see also OH Sources
- Remarks on Time Variations and Radiative Stability of the Celestial Masers
Bettwieser, E. **72**, 97
- H₂O in the Galaxy. II. Duration of the Maser Phase and the Galactic Distribution of H₂O Sources
Genzel, R., Downes, D. **72**, 234
- OH Main Line Masers. II. H₁₁/OH Regions
Elitzur, M. **73**, 322
- Catalogue of Late-type Stars with OH, H₂O of SiO Maser Emission
Engels, D. **75**, 259; **36**, 337
- OH Maser Luminosity and Expansion Velocity Gradient in Mira Envelopes
Rieu, N.Q., Laury-Micoulaut, C., Winnberg, A., Schultz, G.V. **75**, 351
- A Comment on a Mechanism for Pumping OH Masers
Hartquist, T.W. **77**, 361
- Radiative Transport Effects in OH Maser Sources
Kegel, W.H. **77**, 373; **38**, 131
- H₂O in W 51 Main: An Expanding Bubble around a Young Massive Star?
Genzel, R., Downes, D., Moran, J.M., Johnston, K.J., Spencer, J.H., Matveyenko, L.I., Kogan, L.R., Kostenko, V.I., Rönnäng, B., Haschick, A.D., and others **78**, 239
- New VLBI Maps of H₂O Sources in Different Stages of Evolution
Downes, D., Genzel, R., Moran, J.M., Johnston, K.J., Matveyenko, L.I., Kogan, L.R., Kostenko, V.I., Rönnäng, B. **79**, 233
- The Role of Plasma Effects in Generating High-velocity and Symmetric Spectral Features in Galactic Masers
Burdjuzha, V.V., Charugin, V.M., Tomozov, V.M. **79**, 306
- Infrared Pumping of OH Main Lines
Bujarrabal, V., Destombes, J.L., Guibert, J., Marlière-De-muyne, C., Nguyen-Q-Rieu, Omont, A. **81**, 1
- Rotational Excitation of OH by H₂ at Interstellar Temperatures
Flower, D.R. **83**, 33
- A Formaldehyde Maser in NGC 7538
Forster, J.R., Goss, W.M., Wilson, T.L., Downes, D., Dickel, H.R. **84**, L1
- The Pumping of Interstellar OH Main-line Masers: An Efficient Mechanism
Lucas, R. **84**, 36
- OH Pumping by IR Line Overlap. Application to Circumstellar Masers
Bujarrabal, V., Guibert, J., Nguyen-Q-Rieu, Omont, A. **84**, 311
- Infrared Photometry of Mira Variables. OH Maser Pumping Efficiency
Epchtein, N., Guibert, J., Nguyen-Quang-Rieu, Turon, P., Wamsteker, W. **85**, L1
- Catalogue général d'étoiles de type O, données spectroscopiques et photométriques, bande magnétique et listage
Goy, G. **91**, 263; **42**, 91
- Maser Emission from Infrared Stars. I. New OH and H₂O Observations
Olmon, F.M., Winnberg, A., Matthews, H.E., Schultz, G.V. **91**, 264; **42**, 119
- A New 1720 MHz OH Outburst in V 1057 Cyg
Winnberg, A., Graham, D.A., Walmsley, C.M., Booth, R.S. **93**, 79
- Infrared Objects Near to H₂O Masers in Regions of Active Star Formation
Moorwood, A.F.M., Salinari, P. **94**, 299
- Langmuir Scattering and High Velocity Features in Stellar Water Masers
Cohen, N.L., Hohlfield, R.G., Gorenstein, M.V., Potash, R.I., Willson, R.F. **95**, 386
- Pumping of H₁₁/OH Masers by IR Line Overlaps
Guilloteau, S., Lucas, R., Omont, A. **97**, 347
- An Acousto-optical Radiospectrometer System for 22 GHz Region Line Observations
Malkamäki, L.J. **98**, 15
- A Model for the Formaldehyde Maser near NGC 7538-IRS 1
Boland, W., de Jong, T. **98**, 145
- H₂O Masers Associated with Bright Nebulosities in Dark Clouds
Sandell, G., Olofsson, H. **99**, 80
- Infrared Survey of Southern Galactic Maser Sources in the Longitude Range 320° to 30°
Epchtein, N., Lépine, J.R.D. **99**, 210
- The Giant Outburst of the 8 km s⁻¹ Water Maser Feature in Orion
Abraham, Z., Cohen, N.L., Opher, R., Raffaelli, J.C., Zisk, S.H. **100**, L10
- SiO Isotopes in Orion A
Olofsson, H., Hjalmarson, Å., Rydbeck, O.E.H. **100**, L30
- On the Association of the 1720 MHz OH Masers with the H₂CO Masers in NGC 7538 (IRS1)
Guilloteau, S., Lucas, R. **101**, L19
- Collisional and Radiative Excitation of SiO Masers
Bujarrabal, V., Nguyen-Q-Rieu **102**, 65
- Infrared Objects Near to H₂O Masers in Regions of Active Star Formation. II. Survey and 1-20 μm Observations of Southern Sources
Moorwood, A.F.M., Salinari, P. **102**, 197
- H₂O Masers in the Direction of Southern Nebular Objects
Scalise Jr., E., Gahm, G.F., Sandell, G. **104**, 166
- H₂O Masers - Survey of the Galactic Plane. II
Braz, M.A., Scalise, E. Jr. **107**, 272

New Infrared Objects Towards Southern Type I OH and H₂O Masers

Braz, M.A., Epchtein, N. 111, 91

NH₃ and H₂O in the S106 Molecular Cloud

Stutzki, J., Ungerechts, H., Winnenwieser, G. 111, 201

An Unusual OH Maser Associated With V 645 Cygni

Morris, M., Kazès, I. 111, 239

The Importance of Plasma Effects on Electron-cyclotron Maser-emission from Flaring Loops

Sharma, R.R., Vlahos, L., Papadopoulos, K. 112, 377

Pumping of H II/OH Masers: IR Line Overlaps and Collisional Excitation by H₂

Flower, D.R., Guilloteau, S. 114, 238

Physical Conditions in H II/OH Maser Regions

Guilloteau, S. 116, 101

SiO isotope emission from Orion: a model for IRC2

Deguchi, S., Nguyen-Quang-Rieu 117, 314

New H₂O masers in the galactic center region

Güsten, R., Downes, D. 117, 343

Radiative excitation and the intensities of radio recombination lines

Hoang-Binh, D. 121, L19

New optical positions and proper motions of late type stars associated with SiO masers

Soulié, G., Baudry, A. 121, 331; 52, 299

The peculiar circumstellar envelope around IRC + 10420

Diamond, P.J., Norris, R.P., Booth, R.S. 124, L4

The H₂O/OH maser 342.01 + 0.25: a case of supernova-induced star formation?

Sandell, G., Scalise Jr, E., Braz, M.A. 124, 139

Infrared objects near H₂O masers in regions of active star formation. III. Evolutionary phases deduced from IR recombination line and other data

Moorwood, A.F.M., Salinari, P. 125, 342

Ammonia absorption toward W3 (OH): 0''3 resolution maps in the (2,2) line

Guilloteau, S., Stier, M.T., Downes, D. 126, 10

Observations of the ON 1 and ON 2 H II regions at 610 MHz

Matthews, H.E., Spoelstra, T.A.T. 126, 433

Catalogue of non-stellar molecular maser sources and their probable infrared counterparts in the galactic plane

Braz, M.A., Epchtein, N. 127, 425; 54, 167

Mass Exchange, see also Close Binaries, Mass Loss

The Orbital Evolution of Close Triple Systems: The Binary Eccentricity

Mazeh, T., Shaham, J. 77, 145

Roche Lobe Formation in Highly Eccentric X-ray Binary Systems

Haynes, R.F., Lerche, I., Wright, A.E. 81, 83

Binary Model of Circinus X-1. I. Eccentricity from Combined X-ray and Radio Observations

Murdin, P., Jauncey, D.L., Haynes, R.F., Lerche, I., Nicolson, G.D., Holt, S.S., Kaluzienski, L.J. 87, 292

The Initial Mass Ratio of Solar Type Contact Binaries

van 't Veer, F. 98, 213

On the Spin-up of the Mass Accreting Component in a Close Binary System

Packet, W. 102, 17

Conservative Mass Transfer Calculations for Semidetached Binaries Using Response Functions

Hauschildt, M. 112, 386

Mass Transfer in a Low Mass Semidetached Binary, Taking into Consideration Nonequilibrium Effects

Hauschildt, M. 114, 407

CI Cyg: The Stage of Case C Mass Transfer

Iijima, T. 116, 210

Alternate period changes in close binary systems

Mateo, J.J., Whitmire, D.P. 117, L7

Nineteen new spectroscopic binaries and the rate of binary stars among F-M supergiants

Burki, G., Mayor, M. 124, 256

Mass transfer in close binary systems: original and remnant masses

Giuricin, G., Mardirossian, F., Mezzetti, M. 125, 388

High rotational velocity of a region around the primary of Algol

Cugier, H., Molaro, P. 128, 429

Mass Function, see also Star Formation, Stellar Masses

On the Initial Mass Function: The Mass Spectrum of Young OB Associations

Claudius, M., Grosbøl, P.J. 87, 339

The Mass Function for Stars in a Cluster: a Theoretical Derivation

Bhattacharjee, S.K., Williams, I.P. 91, 85

The Mass and Mass Ratio Distribution of Massive O Type Single Stars and Binaries

Vanbeveren, D. 95, 321

On a Gap in the Stellar Mass Distribution

Giannuzzi, M.A. 104, 81

Mass-luminosity relation and initial mass function at the faint end of the main sequence. Is there a real deficit of very low-mass stars?

D'Antona, F., Mazzitelli, I. 127, 149

Mass Loss, see also Close Binaries, Eclipsing Binaries, Mass Exchange, Stellar Wind

Supersonic Mass Flow in Mira Variables

Phillips, J.P. 71, 115

Massive Stars: Evolution with Mass-loss. II. Mass Loss in Early Phases, and Evolution Status of the Transition Wolf Rayet Stars

Chiosi, C., Nasi, E., Bertelli, G. 74, 62

Asymptotic Giant Branch Evolution with Steady Mass Loss

Schönberner, D. 79, 108

The Nature of the Secondaries in Some Single-line Spectroscopic Binaries from X-ray Observations

den Boggende, A.J.F., Lamers, H.J.G.L., Mewe, R. 80, 1

The Effect of Mass Loss on the Chemical Yields from Massive Stars

Chiosi, C., Caimmi, R. 80, 234

The Effect of Mass Loss by Stellar Wind on the Chemical Enrichment of the Galaxy

Chiosi, C. 80, 252

White Dwarf Constraints on Mass Loss Rates and Models of Galactic Evolution

Koester, D., Weidemann, V. 81, 145

Mass Loss and Mass Transfer in Algols: a Check on Some Current Theoretical Views

Mezzetti, M., Giuricin, G., Mardirossian, F. 83, 217

Mass Loss from UW Canis Majoris

Drechsel, H., Rahe, J., Kondo, Y., McCluskey, G.E. Jr. 83, 363

The Expanding Envelope of Zeta Puppis: a Detailed UV-line Fit

Hamann, W.-R. 84, 342

Dynamical Evolution of Cluster Models with a Continuous Stellar Mass Loss

Angeletti, L., Giannone, P. 85, 113

- IUE Observations of the Be Stars HD 102567 (4U1145-61), X Per and γ Cas
Hammerschlag-Hensberge, G., van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., de Loore, C., Glencross, W., Howarth, I., Willis, A.J., Wilson, R., Menzies, J. **85**, 119
- Spectroscopic Evidence of Strong Mass Flow Variations in the Envelope of the T Tauri Star DR Tau
Appenzeller, I., Krautter, J., Smolinski, J., Wolf, B. **86**, 113
- Resonance Line Profiles in A Type Supergiants from IUE and Copernicus Spectra
Praderie, F., Talavera, A., Lamers, H.J.G.L.M. **86**, 271
- Masses and Mass Loss from O and Of Stars
Lamers, H.J.G.L.M., Paerels, F.B.S., de Loore, C. **87**, 68
- On the Binary Frequency Distribution and Evolution of Wolf-Rayet Stars
Vanbeveren, D., Conti, P.S. **88**, 230
- The Numbers of Red Supergiants and WR Stars in Galaxies: An Extremely Sensitive Indicator of Chemical Composition
Maeder, A., Lequeux, J., Azzopardi, M. **90**, L17
- The Effect of Mass Loss on the Age-determination of Young Clusters, with an Application to the Orion OB-Association
Paerels, F.B.S., Lamers, H.J.G.L.M., de Loore, C. **90**, 204
- Supergiant Variability: Amplitudes and Pulsation Constants in Relation with Mass Loss and Convection
Maeder, A. **90**, 311
- The Most Massive Stars in the Galaxy and the LMC: Quasi-homogeneous Evolution, Time-averaged Mass Loss Rates and Mass Limits
Maeder, A. **92**, 101
- Infrared Photometry of HDE 226868 (Cyg X-1) from 2.3 to 10 μ : Mass Loss Rate
Persi, P., Ferrari-Toniolo, M., Grasdalen, G.L., Spada, G. **92**, 238
- Surface Composition Changes in Massive Star Evolution with Mass Loss
Noels, A., Conti, P.S., Gabriel, M., Vreux, J.M. **92**, 242
- Mass Loss from Planetary Protoatmospheres and from the Proto-planetary Nebula
Horedt, G.P. **92**, 267
- Study of the Variable F-type Supergiants HD 161796 and HD 163506 in Radial Velocity and Photometry
Burki, G., Mayor, M., Rufener, F. **92**, 325; **42**, 383
- Population Inversion and Saturation Behaviour of Celestial Masters in Dusty Regions
Bettwieser, E. **93**, 8
- Rates of Mass Loss from O-stars
Chiosi, C. **93**, 163
- Evolution of 1.2 M_{\odot} Star and the Formation of Planetary Nebulae
Harpaz, A., Kovetz, A. **93**, 200
- IUE and Optical Observations of V 861 Scorpii
Howarth, I.D., Wilson, R., Carter, B.S., Menzies, J.W., Roberts, G., Whitelock, P.A., van Dessel, E.L., de Loore, C., Burger, M., Sandford, M.C.W. **93**, 219
- The Reflection Nebula Surrounding HD 87643
Surdej, A., Surdej, J., Swings, J.P., Wamsteker, W. **93**, 285
- Phase-correlated P Cygni Profile Variations of the C III Multiplet in UW Canis Majoris
Drechsel, H., Rahe, J., Kondo, Y., McCluskey, Jr., G.E. **94**, 285
- IUE Observations of X Persei, the Proposed Optical Counterpart of the X-ray Source 4 U 0352+30
Bernacca, P.L., Bianchi, L. **94**, 345
- Evolution of Massive Stars with Low Metal Abundance Holding for the Magellanic Clouds
Hellings, P., Vanbeveren, D. **95**, 14
- The Fluctuation Theory of Mass Loss: Application to the Evolution of Massive Stars
Andriesse, C.D., Packet, W., de Loore, C. **95**, 202
- Decelerated Flows of Matter around the Quasars PHL 5200 and RS23
Surdej, J., Swings, J.P. **96**, 242
- The Most Massive Stars Evolving to Red Supergiants: Evolution with Mass Loss, WR Stars as Post-red Supergiants and Pre-supernovae
Maeder, A. **99**, 97
- Infrared and X-ray Observations of the Binary System V 861 Sco
Tanzi, E.G., Maraschi, L., Treves, A., Tarengi, M. **100**, 68
- Monitoring Line Profile Changes in κ Orionis, BO.51A
Stalio, R., Sedmak, G., Rusconi, L. **101**, 168
- Evolution of Massive Stars with Mass Loss and Formation of WR Stars
Noels, A., Gabriel, M. **101**, 215
- Evolution and Nucleosynthesis in Massive Stars with Mass Loss: The Yields in Helium and Heavy Elements and Constraints on the Past Star Formation Rate
Maeder, A. **101**, 385
- Mass Loss and Overshooting in Massive Stars
Bressan, A.G., Bertelli, G., Chiosi, C. **102**, 25
- The Ultraviolet Spectrum of the Planetary Nebula NGC 2371 and its Exciting Star
Pottasch, S.R., Gathier, R., Gilra, D.P., Wesselius, P.R. **102**, 237
- Grids of Evolutionary Models for the Upper Part of the HR Diagram. Mass Loss and the Turning of Some Red Supergiants into WR Stars
Maeder, A. **102**, 401
- Free-Free Emission from Extended Envelopes. II. The Mass Loss and the Envelope Ionization
Felli, M., Panagia, N. **102**, 424
- Ultraviolet Observations of Two Extreme Population II Stars: Detection of Chromospheric Emission and Mass Loss
Spite, M., Caloi, V., Spite, F. **103**, L11
- IUE and Ground-based Spectroscopic Observations of the S Dor-type LMC Variable R 71 during Minimum State
Wolf, B., Appenzeller, I., Stahl, O. **103**, 94
- Mass Loss in Close Binary Systems
Giannuzzi, M.A. **103**, 111
- Image Tube Spectroscopic Studies of Rapid Variables. IV. Spectroscopic and Photometric Observations of AE Aquarii
Chincarini, G., Walker, M.F. **104**, 24
- Ultraviolet Observations of the Be Star and X-ray Binary 4U 1145-61 (= HD 102567 = Hen 715) obtained with the IUE
de Loore, C., Burger, M., Hensberge, H., Van Dessel, E.L. **104**, 150
- The Helium to Heavy Element Enrichment Ratio, AY/AZ
Chiosi, C., Matteucci, F. **105**, 140
- Evolutionary Scenarios Leading Massive Stars to WR Stars: Their Mutual Importance; the Role of Mixing
Maeder, A. **105**, 149
- On the Ionization and Velocity Structure of Expanding Circumstellar Envelopes
Drechsel, H., Rahe, J. **106**, 70

Mass Loss from α Cyg (A2 Ia) Derived from the Profiles of Low Excitation Fe II Lines

Hensberge, H., Lamers, H.J.G.L.M., de Loore, C., Bruhweiler, F.C. **106**, 137

Wind Acceleration in Early-type Stars: The Momentum Problem and the Terminal Velocity

Panagia, N., Macchetto, F. **106**, 266

On Hot Star Winds. I. Radiation-driven Winds

Leroy, M., Lafon, J.-P.J. **106**, 345

On Hot Star Winds. II. Energy Transport - Corona-like Temperature Enhancements

Leroy, M., Lafon, J.-P.J. **106**, 358

IUE Ultraviolet Spectrophotometry of 15 Galactic Wolf-Rayet Stars

Nussbaumer, H., Schmutz, W., Smith, L.J., Willis, A.J. **106**, 379; **47**, 257

Mass Loss Rates in the Open Cluster IC 1805

Llorente de Andrés, F., Burki, G., Ruiz del Arbol, J.A. **107**, 43

Variability and Mass Loss in the Extreme Supergiant ζ^1 Sco

Burki, G., Heck, A., Bianchi, L., Cassatella, A. **107**, 205

Detection of Further Red Giants with "Hybrid" Atmospheres and a Possible Correlation with Double Circumstellar Mg II and Ca II Lines

Reimers, D. **107**, 292

Period Changes in Detached Close Binary Systems Due to Anisotropic Ejection of Mass

Van Hamme, W. **107**, 397

Spectroscopy and Infrared Photometry of Cyg OB 2 Stars: Velocity Law and Mass-loss Rates

Leitherer, C., Hefele, H., Stahl, O., Wolf, B. **108**, 102

Analysis of the IUE and Optical Spectra of the Peculiar Be Star HD 87643

de Freitas Pacheco, J.A., Gilra, D.P., Pottasch, S.R. **108**, 111

The Spectrum of the WC-O VI Star ST 3 in the Yellow Range

Thevenin, F., Pitault, A. **108**, 195

Onset of Rapid Mass Loss in Cool Giant Stars: Magnetic Field Effects

Mullan, D.J. **108**, 279

On the Theory of Shock-heated Atmospheres. III. Discussion of the Formalism and Application to Stellar Coronae

Souffrin, P. **109**, 205

Mass Loss from the Protoplanetary Nebula

Horedt, G.P. **110**, 209

Mass Loss, Linear Polarization Variability, and Duplicity of the Luminous B2 Supergiant HD 80077

Knoechel, G., Moffat, A.F.J. **110**, 263

High Dispersion Spectroscopy of the LMC Star S Doradus During Maximum Light

Stahl, O., Wolf, B. **110**, 272

Infrared Energy Distribution of Cyg. OB2 No. 12

Persi, P., Ferrari-Toniolo, M. **111**, L7

On the Spin Down Episodes of Vela X-1

Molteni, D., Rapisarda, M., Re, S., Robba, N.R. **111**, 365

Transformation of Magnetogravitational Waves in the Solar Atmosphere

Zhugzhda, Y.D., Dzhalilov, N.S. **112**, 16

AG Car: A Galactic S Dor Variable

Wolf, B., Stahl, O. **112**, 111

Possible Correlations of Expansion Velocity with Period and 1 μ m Intensity Variation in Mira Variables

Ukita, N. **112**, 167

Evolution of Low Mass Stars Through Mass Loss: Transition from the Main Sequence to the Degenerate Phase

D'Antona, F., Mazzitelli, I. **113**, 303

The Ultimate Fate of Wolf-Rayet Stars as Supernovae

Maeder, A., Lequeux, J. **114**, 409

Asymmetric Emission-line Regions with Out-flowing Mass in QSOs and the $Z_{ab} > Z_{em}$ Systems

Goldman, I., Bahcall, J.N. **115**, 242

Has P Cygni Generated a Shock Front Which Emits Nonthermal Radiation?

Wendker, H.J. **116**, L1

The Far-UV Spectrum of the Low-excitation Planetary Nebula HD 138403

Surdej, J., Heck, A. **116**, 80

Mass Loss from Extreme Helium Stars. Detailed UV-line Fits for HD 160641, BD -9°4395 and BD +10°2179

Hamann, W.-R., Schönberner, D., Heber, U. **116**, 273

Models for Stellar Coronae: The Effects of Coronal Heating with Long Dissipation Scale Lengths

Hearn, A.G. **116**, 296

The Combined Effect of Mass Loss and Overshooting. I. The Evolution of 35 M_{\odot} to 100 M_{\odot} Stars During Core Hydrogen Burning

Doom, C. **116**, 303

The Combined Effect of Mass Loss and Overshooting. II. The Evolution of 10 M_{\odot} to 30 M_{\odot} Stars During Core Hydrogen Burning

Doom, C. **116**, 308

Evolution of chemical abundances in massive stars. I. OB stars, Hubble-Sandage variables and Wolf-Rayet stars. Changes at stellar surface and galactic enrichment by stellar winds

Maeder, A. **120**, 113

The ultraviolet spectrum of the supermassive object R 136 a. I. The mass loss rate

Feitzinger, J.V., Hanuschik, R.W., Schmidt-Kaler, T. **120**, 269

The upper mass limit for white dwarf progenitors and the initial-final mass relation for low and intermediate mass stars

Weidemann, V., Koester, D. **121**, 77

Detection of a stellar prominence of the K supergiant 32 Cyg

Schröder, K.-P. **124**, L16

A study of UV spectra of ζ Aur/VV Cep stars. IV. System parameters and mass-loss of δ Sge

Reimers, D., Schröder, K.-P. **124**, 241

A study of ultraviolet spectra of ζ Aur/VV Cep systems. III. Atlas of theoretical curves of growth

Hempe, K. **126**, 220; **53**, 339

A study of ultraviolet spectra of ζ Aur/VV Cep systems. II. Mass loss of supergiants in ζ Aur, 32 Cyg, and 31 Cyg

Che, A., Hempe, K., Reimers, D. **126**, 225

R 127: an S Dor type variable intermediate between Of and WN

Stahl, O., Wolf, B., Klare, G., Cassatella, A., Krautter, J., Persi, P., Ferrari-Toniolo, M. **127**, 49

Boss 1985: mass loss investigation based on IUE spectra

Che, A., Reimers, D. **127**, 227

Mass flow rates in quasars

Allan, P.M. **127**, 254

Determination of mass-loss rates from early-type stars on the basis of "log (W_1)-log (W_1^0)" diagrams

Surdej, J. **127**, 304

CQ Cephei. Is the period really changing?

Walker, E.N., Lloyd, C., Pike, C.D., Stickland, D.J., Zuiderwijk, E.J. **128**, 394

Mass Luminosity Relation, Mass Radius Relation

The Local Mass-to-light Ratio in Spiral Galaxies

Bosma, A., Van der Kruit, P.C. **79**, 281

Mass-to-light Ratios of Nearby Groups of Galaxies

Materne, J. **86**, 91

Dynamical Study of the Cluster of Galaxies Abell 194 by the Multi Mass Mode

Capelato, H.V., Gerbal, D., Mathez, G., Mazure, A., Roland, J., Salvador-Solé, E. **87**, 132

A Two Component Mass Model for M81 (NGC 3031)

Rohlf, K., Kreitschmann, J. **87**, 175

On the M/L Ratios in Elliptical Galaxies

Michard, R. **91**, 122

Massive Stars, see also Star Formation, Stellar-Evolution

Massive Stars: Evolution with Mass-loss. II. Mass Loss in Early Phases, and Evolution Status of the Transition Wolf Rayet Stars

Chiosi, C., Nasi, E., Bertelli, G. **74**, 62

The Influence of Stellar Wind on the Evolution of Massive Binaries with an Application to Massive X-ray Binaries

Vanbeveren, D., De Grève, J.P. **77**, 295

The Effect of Mass Loss on the Chemical Yields from Massive Stars

Chiosi, C., Caimmi, R. **80**, 234

On the Evolutionary Status of the Optical Components of Massive X-ray Binaries

Savonije, G.J. **81**, 25

Non-LTE Analysis of the O 3-star HD 93250

Kudritzki, R.-P. **85**, 174

Comparison Between the Observations and Evolutionary Calculations for Massive Close Binary Systems

Vanbeveren, D., Loore, C. de **86**, 21

Ultraviolet Studies of the Magellanic Clouds. II. Internal Extinction, Formation of Massive Stars, Comparison with Other Galaxies

Vangioni-Flam, E., Lequeux, J., Maucherat-Joubert, M., Rocca-Volmerange, B. **90**, 73

Circumstellar Absorption and Intrinsic Colours of Massive Stars

Ardeberg, A., Maurice, E. **91**, 53

The Most Massive Stars in the Galaxy and the LMC: Quasi-homogeneous Evolution, Time-averaged Mass Loss Rates and Mass Limits

Maeder, A. **92**, 101

Evolution of Massive Stars with Low Metal Abundance Holding for the Magellanic Clouds

Hellings, P., Vanbeveren, D. **95**, 14

The Mass and Mass Ratio Distribution of Massive O Type Single Stars and Binaries

Vanbeveren, D. **95**, 321

Mass Loss and Overshooting in Massive Stars

Bressan, A.G., Bertelli, G., Chiosi, C. **102**, 25

Mass Loss from O Subdwarfs

Hamann, W.-R., Gruschinske, J., Kudritzki, R.P., Simon, K.P. **104**, 249

High Dispersion Spectroscopy of the LMC Star S Doradus During Maximum Light

Stahl, O., Wolf, B. **110**, 272

Radial Velocity Studies of Spectroscopic Binaries with the Objective Prism II: Three New Massive Binaries in the Scorpius OB 1 Association

Gieseking, F. **112**, 395; **49**, 673

On the Difference Between the Initial Mass Function of Single Stars and of Primaries of Binaries

Vanbeveren, D. **115**, 65

Evolution of massive pregalactic stars. I. Hydrogen and helium burning

El Eid, M.F., Fricke, K.J., Ober, W.W. **119**, 54

Evolution of massive pregalactic stars. II. Nucleosynthesis in pair creation supernovae and pregalactic enrichment

Ober, W.W., El Eid, M.F., Fricke, K.J. **119**, 61

Theoretical evolution of massive stellar aggregates

Vanbeveren, D. **124**, 71

Non-LTE analysis of massive O stars. III. The O 3 stars HD 93128, HD 93129 A, and HDE 303308

Simon, K.P., Jonas, G., Kudritzki, R.P., Rahe, J. **125**, 34

Semiconvective diffusion and energy transport

Langer, N., Sugimoto, D., Fricke, K.J. **126**, 207

Metal Abundance, Metallicity, see also Barium Stars

Magnetic Latitude of the Metals in Ap Stars

Floquet, M. **74**, 250

Metal Abundances and Microturbulence in Seven Solar-type Stars. II. Model Atmosphere Analyses

Gehren, T. **75**, 73

On the MK Spectral Classification of Metal-poor Late-type Stars

Foy, R. **78**, 25

The Oscillator Strengths and the Dissociation Energy of SiH⁺ as Determined from Time Resolved Precision Spectroscopy

Carlson, T.A., Copley, J., Durić, N., Elander, N., Erman, P., Larsson, M., Lyyra, M. **83**, 238

A Spectrum Analysis for the Unusual Metallic Line White Dwarf G 165-7

Wehrse, R., Liebert, J. **86**, 139

Metal Abundances of F and G Dwarfs Determined by the Radial Velocity Scanner Coravel

Mayor, M. **87**, L1

The Space Distribution of Metal-poor Stars of the Galactic Halo

Becker, W. **87**, 80

The Sun among the Stars. II. Solar Color, Hyades Metal Content and Distance

Hardorp, J. **88**, 334

Relations between Nucleosynthesis Rates and the Metal Abundance

Tinsley, B.M. **89**, 246

The Numbers of Red Supergiants and WR Stars in Galaxies: An Extremely Sensitive Indicator of Chemical Composition

Maeder, A., Lequeux, J., Azzopardi, M. **90**, L17

On the Photometric Colour Indices of the Sun

Chmielewski, Y. **93**, 334

Evolution of Massive Stars with Low Metal Abundance Holding for the Magellanic Clouds

Hellings, P., Vanbeveren, D. **95**, 14

Radial Metal Variation as Possible Explanation of Colour Gradients in the Cores of Globular Clusters

Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **96**, 254

Galactic Metal Abundance Gradient in Young Stellar Population

Panagia, N., Tosi, M. **96**, 306

Metallicity Distribution in the System of Globular Clusters

Colin, J. **97**, 33

Metallicity Distribution in the System of Globular Clusters

Colin, J. **97**, 33

Metal Abundance and Microturbulence in F0-G2 Stars and the Calibration of the Strömgen m_1 Index

Nissen, P.E. **97**, 145

Metal Enrichment in the Atmospheres of Extremely Metal-deficient Dwarf Stars by Accretion of Interstellar Matter
Yoshii, Y. **97**, 280

A Photometric Determination of the Metal Content for Cepheids in the Small Magellanic Cloud

Pel, J.W., van Genderen, A.M., Lub, J. **99**, L1

A Catalogue of [Fe/H] Determinations

Cayrel De Strobel, G., Bentolila, C., Hauck, B., Lovy, D. **101**, 419; **45**, 97

On Some Extreme Metal-deficient Giants

Bartkevičius, A., Straižys, V. **104**, 215

A search for halo gradients through RR Lyrae pulsators

Castellani, V., Maceroni, C., Tosi, M. **128**, 64

Metal abundance and age of the globular cluster NGC 6397 from photoelectric *ubvy- β* photometry of turn-off stars

Ardeberg, A., Lindgren, H., Nissen, P.E. **128**, 194

Metallic Line Stars

A Possible Interpretation of Subgiant δ Scuti Variables

Valtier, J.-C., Baglin, A., Auvergne, M. **73**, 329

The Rotational Velocity Effect on the Main Sequence Am Stars Metallicity

Burkhart, C. **74**, 38

Circulation in Am Star Envelopes

Moss, D. **78**, 119

Second Catalogue of Am Stars with Known Spectral Types

Curchod, A., Hauck, B. **80**, 331; **38**, 449

Contribution to the Study of Composite Spectra Stars. I. New Organization for the Bright Stars Pattern of Hynek's Lists

Ginestet, N., Pedoussaut, A., Carquillat, J.M., Nadal, R. **81**, 333

Photometric Variability on the Lower Part of the Cepheid Instability Strip I: Evolved Am Stars

Garrido, R., Lopez de Coca, P., Quintana, J.M., Rolland, A., Saez, M. **83**, 114

On the UV Classification of the Am Stars

Jaschek, M., Jaschek, C., Cucchiari, A. **89**, 380

HR 976 and 4 C 34.13: An X-ray Odd Couple

Cash, W., Snow, T.P., Jr. **91**, L7

UV-photometry of Am Stars

van't Veer-Menneret, C., Faraggiana, R., Burkhart, C. **92**, 13

The Atmospheric Abundances of the Giant Am Star 22 Bootis

Burkhart, C., Van't Veer, C., Couprie, M.F. **92**, 132

A Comparison of the Mg Resonance Lines in Am and Non Am Stars of Similar Temperatures

Böhm-Vitense, E. **92**, 219

Properties of Am Stars in the Geneva Photometric System

Hauck, B., Curchod, A. **92**, 289

The Absolute Magnitude of the Am Stars

Gómez, A.E., Grenier, S., Jaschek, M., Jaschek, C., Heck, A. **93**, 155

On the Search for Transition Zone Lines in Late A Type Stars

Crivellari, L., Praderie, F. **107**, 75

Contribution to the Study of Composite Spectra. II. A, Am, Ap Spectroscopic Binaries (Text in French)

Ginestet, N., Jaschek, M., Carquillat, J.M., Pedoussaut, A. **107**, 215

AN And: A Detached Eclipsing Binary System with an Am Primary Member

Giuricin, G., Mardirossian, F., Mezzetti, M. **114**, 74

Ultraviolet and visible photometric parameters for the Am stars

Nicolet, B., Cramer, N. **117**, 248

The z-distribution of Am stars

Ochsenbein, F. **118**, 197

Lists of photometric Am candidates

Nicolet, B. **119**, 164; **51**, 245

Properties of Am, δ Del, and δ Sct stars in the *VBLW* system

Wiertz, M.J.J., van Genderen, A.M. **121**, 35

Light variations of the Am star 32 Vir

Bartolini, C., Grilli, F., Parmeggiani, G., Piccioni, A., Silveri, P. **124**, 155; **53**, 139

Meteors, Meteoroids, Meteorites, Meteor Streams

Meteoritic Anomalies and Explosive Neutron Processing of Helium-burning Shells

Thielemann, F.K., Arnould, M., Hillebrandt, W. **74**, 175

Explosive Nucleosynthesis and Meteoritic Isotope Anomalies

Chance, E.M., Harris, H.J. **74**, 247

Isotopes Anomalies in Meteorites and the Origin of the Galactic Cosmic Rays

Audouze, J., Chièze, J.-P., Vangioni-Flam, E. **91**, 49

Perturbations by Jupiter of the Particles Ejected from Comet Lexell

Carusi, A., Kresáková, M., Valsecchi, G.B. **116**, 201

Evolution of chemical abundances in massive stars. II. Abundance anomalies in Wolf-Rayet stars in relation with cosmic rays and ^{22}Ne in meteorites

Maeder, A. **120**, 130

Evolution and decay of the peculiar meteor stream associated with Comet Lexell

Carusi, A., Kresáková, M., Valsecchi, G.B. **127**, 373

Millimetre Observations

Array Detectors for Millimetre Line Astronomy

Gillespie, A.R., Phillips, T.G. **73**, 14

A Search for CaO at mm-Wavelengths in Stars and Molecular Clouds

Hocking, W.H., Winnewisser, G., Churchwell, E., Percival, J. **75**, 268

Reduction of Baseline Ripple in Millimeter Radio Spectra by Quasi-optical Phase Modulation

Goldsmith, P.F., Scoville, N.Z. **82**, 337

Observations of Millimeter Wave Emission from Interstellar HCO^+ , HCN, HNC, and CCH

Baudry, A., Combes, F., Perault, M., Dickman, R. **85**, 244

Millimeter-wave and X-ray Observations of a Cen-A Flare

Kaufmann, P., Strauss, F.M., Coe, M.J., Carpenter, G.F. **100**, 189

Minor Planets, see Asteroids

Photoelectric Observations of 44 Nysa During 1981 Opposition

Piironen, J.O. **112**, 172

381 astrometric positions of minor planets obtained at the GPO telescope of ESO, La Silla, February/March, 1981

Debehogne, H., Machado, L.E., Caldeira, J.F., Vieira, G.G., Netto, E.R., Le Van Suu, A. **127**, 424; **54**, 47

Mira Stars

Supersonic Mass Flow in Mira Variables

Phillips, J.P. **71**, 115

OH Maser Luminosity and Expansion Velocity Gradient in Mira Envelopes

Rieu, N.Q., Laury-Micoulaut, C., Winnberg, A., Schultz, G.V. **75**, 351

Observation of Continuum Emission between 1 and 4 mm from the Carbon Star V Cygni

Querci, M., Courtin, R., Querci, F., Coron, N., Gispert, R. **77**, 155

OH Pumping by IR Line Overlap. Application to Circumstellar Masers

Bujarrabal, V., Guibert, J., Nguyen-Q-Rieu, O., A. **84**, 311

Infrared Photometry of Mira Variables. OH Maser Pumping Efficiency

Epchtein, N., Guibert, J., Nguyen-Quang-Rieu, Turon, P., Wamsteker, W. **85**, L1

Luminosity of the Mira Variables

Celis, L.S. **89**, 145

On the Space Distribution of Semi-Regular Variables

Aslan, Z. **90**, 355

Maser Emission from Infrared Stars. I. New OH and H₂O Observations

Olson, F.M., Winnberg, A., Matthews, H.E., Schultz, G.V. **91**, 264; **42**, 119

Near Infrared Photometry and OH Observations of Mira Variables. Implications for Stellar Evolution

Memessier, M.O. **93**, 325

A Systematic Search at 1612 MHz for OH Maser Sources. III. The Galactic Distribution, Kinematics, and Emission Properties of Type II OH/IR Sources

Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **95**, 156

Metallicity and Dynamical Parameters for Spheroidal and Elliptical Galaxies

Vigroux, L., Chièze, J.P., Lazareff, B. **98**, 119

The Distance of Large Amplitude Red Variables

Celis, S., L. **99**, 58

Spectroscopic Study of the Infrared Ca II Triplet in S-type Mira Variable Stars

Contadakis, M.E., Solf, J. **101**, 241

Collisional and Radiative Excitation of SiO Masers

Bujarrabal, V., Nguyen-Q-Rieu **102**, 65

The Diameter of Mira

Bonneau, D., Foy, R., Blazit, A., Labeyrie, A. **106**, 235

On the Structure of the Outer Layers of Cool Carbon Stars

Querci, F., Querci, M., Wing, R.F., Cassatella, A., Heck, A. **111**, 120

Possible Correlations of Expansion Velocity with Period and 1 μ m Intensity Variation in Mira Variables

Ukita, N. **112**, 167

The pulsation of carbon Miras

Bergeat, J., Sibai, A.M. **119**, 207

Infrared speckle imaging: improvement of the method; results on Miras and protostars

Mariotti, J.M., Chelli, A., Foy, R., Léna, P., Sibille, F., Tchountonov, G. **120**, 237

The nature of OH/IR stars. I. Infrared Mira variables

Engels, D., Kreyss, E., Schultz, G.V., Sherwood, W.A. **124**, 123

Water vapour absorption at 2.7 μ m from M-type Mira variables

Iyengar, K.V.K., Ghosh, S.K., Tandon, S.N. **128**, 255

The shock-induced variability of the H α emission profile in Mira

Gillet, D., Maurice, E., Baade, D. **128**, 384

MK Classification, see Spectral Classification

mm Radiation, see Millimetre Observations

Modes, see Oscillations

On the dynamical evolution of spiral galaxies

Bertin, G. **127**, 145

Molecular Clouds, see Interstellar Clouds, Radio Frequency Lines: Molecular Lines

Observations of the $J=2 \rightarrow 1$ Transitions of ¹²C¹⁶O and ¹²C¹⁸O Towards Galactic H II Regions

White, G.J., Watt, G.D., Beckman, J.E., Rose, W.B., van Vliet, A.H.F. **84**, 212

CO Observations of Interstellar Clouds: Isotopic Ratios

Combes, F., Falgarone, E., Guibert, J., Nguyen-Q-Rieu **90**, 88

OH Observations of Molecular Complexes in Orion and Taurus

Baud, B., Wouterloot, J.G.A. **90**, 297

Cos B Observation of High Energy Gamma Ray Emission from the Orion Cloud Complex

Caraveo, P.A., Bennett, K., Bignami, G.F., Hermsen, W., Kanbach, G., Lebrun, F., Masnou, J.L., Mayer-Hasselwander, H.A., Paul, J.A., Sacco, B. **91**, L3

Thermal Overlap Effects and Collision Models: HCN

Guilloteau, S., Baudry, A. **97**, 213

Small Scale Clumping in the Orion Molecular Cloud

Bastien, P., Bieging, J., Henkel, C., Martin, R.N., Pauls, T., Walmsley, C.M., Wilson, T.L., Ziurys, L.M. **98**, L4

A Model for the Formaldehyde Maser near NGC 7538-IRS 1

Boland, W., de Jong, T. **98**, 145

A Study of the S 155 A—Cep B Cloud and Its Relation to Cepheus OB 3 Association

Panagia, N., Thum, C. **98**, 295

A Potential Interstellar Species: CS⁺

Quarta, M.L., Singh, P.D. **98**, 384

Detection of Interstellar C₂ toward Cygnus OB 2 No 12, ζ Persei, α Andromedae, ζ Ophiuchi, and ν Cygni

Cosmovici, C.B., Strafella, F. **98**, 408

H₂CO and CO Observations of TMC 1

Henkel, C., Wilson, T.L., Pankonin, V. **99**, 270

Dust Temperature and IR Emission in High Extinction Molecular Clouds

Natta, A., Palla, F., Panagia, N., Preite-Martinez, A. **99**, 289

The Giant Outburst of the 8 km s⁻¹ Water Maser Feature in Orion

Abraham, Z., Cohen, N.L., Opher, R., Raffaelli, J.C., Zisk, S.H. **100**, L10

Angular Sizes of Gamma-ray Sources

Li Ti Pei, Wolfendale, A.W. **100**, L26

Molecule Formation in Interstellar Clouds by Gas Phase Reactions

Henning, K. **100**, 333; **44**, 405

A Comparison of Visual Extinction with H₂CO and H I Absorption in Heiles Cloud 2

Sherwood, W.A., Wilson, T.L. **101**, 72

Observations of CO in H I Clouds: Correlations with H I and OH

Kazès, I., Crovisier, J. **101**, 401

Contribution of Cosmic Ray-irradiated Molecular Clouds to the Number of Apparent γ -ray Sources

Li Ti Pei, Wolfendale, A.W. **103**, 19

Observations of HCO⁺, H¹³CO⁺, ¹³CO and C¹⁸O in Taurus Cloudlets

Baudry, A., Černicharo, J., Pérault, M., de la Noë, J., Despois, D. **104**, 101

Ammonia in Orion. II. The Gas in and Around OMC-1

Ziurys, L.M., Martin, R.N., Pauls, T.A., Wilson, T.L. **104**, 288

- The Lick Galaxy Counts, the Local Interstellar Absorption and Molecular Hydrogen
Strong, A.W., Lebrun, F. **105**, 159
- Far Infrared Survey of Extended Molecular Clouds H II Regions Complexes Along the Galactic Plane
Gispert, R., Puget, J.L., Serra, G. **106**, 293
- Formaldehyde Emission from DR21(OH)
Wilson, T.L., Martin-Pintado, J., Gardner, F.F., Henkel, C. **107**, L10
- The State of Ionization in Dense Molecular Clouds
Guélin, M., Langer, W.D., Wilson, R.W. **107**, 107
- The Gas Dynamics of H II Regions. VI. H II Regions in Collapsing Massive Molecular Clouds
Yorke, H.W., Bodenheimer, P., Tenorio-Tagle, G. **108**, 25
- Interstellar Grain Explosions: Molecule Cycling Between Gas and Dust
d'Hendecourt, L.B., Allamandola, L.J., Baas, F., Greenberg, J.M. **109**, L12
- Astronomical Study of the C₃N and C₄H Radicals: Hyperfine Interactions and Rho-type Doubling
Guélin, M., Friberg, P., Mezaoui, A. **109**, 23
- Star Formation in the NH₃ Cloud of the NGC 2071 Region
Calamai, G., Felli, M., Giardinelli, S. **109**, 123
- The Millimeter Wave Spectrum and Discharge Chemistry of HC₃N
Winnewisser, G., Winnewisser, M., Christiansen, J.J. **109**, 141
- Further (¹²C/¹³C) Ratios from Formaldehyde: A Variation with Distance from the Galactic Center
Henkel, C., Wilson, T.L., Bieging, J. **109**, 344
- Radiative Transfer: Comparison of Finite Difference Equations
Kalkofen, W., Wehrse, R. **110**, 18
- Ortho-to-Para Ratios in Interstellar Ammonia
Wilson, T.L., Batrla, W., Pauls, T.A. **110**, L20
- Can Giant Molecular Clouds Form in Spiral Arms?
Casoli, F., Combes, F. **110**, 287
- The Temperature Dependence of the HCO⁺/DCO⁺ Abundance Ratio in Dense Interstellar Clouds
Herbst, E. **111**, 76
- NH₃ and H₂O in the S106 Molecular Cloud
Stutzki, J., Ungerechts, H., Winnewisser, G. **111**, 201
- Ammonia Observations of Cold Cloud Cores
Ungerechts, H., Walmsley, C.M., Winnewisser, G. **111**, 339
- OH Observations of NH₃ Sources
Little, L.T., Cesarsky, D.A. **112**, 49
- Near-infrared Sources in the NGC 6334 Molecular Cloud
Persi, P., Ferrari-Toniolo, M. **112**, 292
- Formaldehyde Absorption Measurements of Selected Galactic Molecular Clouds
Bieging, J., Wilson, T.L., Downes, D. **112**, 394; **49**, 607
- Extended and Anisotropic High-velocity Gas Flows in the Orion-KL Region
Olofsson, H., Ellder, J., Hjalmarsen, Å., Rydbeck, G. **113**, L18
- The H II Region - Molecular Cloud Complex Sh 2-269: An Optical and Millimeter Wavelength Study
Heydari-Malayeri, M., Testor, G., Baudry, A., Lafon, G., de la Noë, J. **113**, 118
- The Kinematical Structure of the Bipolar Nebula S 106
Solf, J., Carsenty, U. **113**, 142
- Formaldehyde Absorption Towards OH Sources
Forster, J.R., Boland, W. **114**, 109
- 3D Models for Self-gravitating, Rotating Magnetic Interstellar Clouds
Dorfi, E. **114**, 151
- Loss of CO⁺ Ions by Reaction with H₂ in OMC-1
Huntress, W.T., Jr., Prasad, S.S., Kemper, P.R., Cates, R.D., Bowers, M.T. **114**, 275
- Detection of the (8,8) and (9,9) Absorption Lines of Ammonia: The Hot Molecular Cloud Toward Sgr B 2
Wilson, T.L., Ruf, K., Walmsley, C.M., Martin, R.N., Pauls, T.A., Batrla, W. **115**, 185
- Discrete Sources of Cosmic Gamma Rays
Li, T.P., Wolfendale, A.W. **116**, 95
- A New Near-infrared Source in the Molecular Cloud Associated with S106
Hofmann, R.G., Larson, H.P. **116**, 179
- Structure of molecular clouds. VI. The accuracy of the standard analysis
Stenholm, L.G. **117**, 41
- Westerbork H I observations of the H II region W 3
Goss, W.M., Retallack, D.S., Felli, M., Shaver, P.A. **117**, 115
- High density molecular gas in the ρ Ophiuchi cloud
Martin-Pintado, J., Wilson, T.L., Gardner, F.F., Henkel, C. **117**, 145
- Star formation in Bok globules and low-mass clouds. I. The cometary globules in the Gum Nebula
Reipurth, B. **117**, 183
- Abnormal extinction and dust properties in M 16, M 17, NGC 6357 and the Ophiuchus dark cloud
Chini, R., Krügel, E. **117**, 289
- HCN J=1-0 observations in L 673 and S 235B: two different cases of hyperfine anomalies
Sandell, G., Höglund, B., Kislyakov, A.G. **118**, 306
- Six-centimeter H₂CO observations: envelopes of dark clouds
Vanden Bout, P.A., Snell, R.L., Wilson, T.L. **118**, 337
- Gravitational collapse and fragmentation of isothermal, non-rotating, cylindrical clouds
Bastien, P. **119**, 109
- Formaldehyde toward Cas A: cloud sizes and H₂ densities
Batrla, W., Wilson, T.L., Martin-Pintado, J. **119**, 139
- VLA observations of H₂CO in DR 21
Dickel, H.R., Lubenow, A.F., Goss, W.M., Forster, J.R., Rots, A.H. **120**, 74
- An exact solution for an isothermal gas cloud with fast differential rotation
Schmitz, F. **120**, 234
- Detection of HCO⁺ and HCN absorption towards three galactic H II-regions
Nyman, L.-Å. **120**, 307
- The nuclear hyperfine structure of deuterated ammonia
Bester, M., Urban, S., Yamada, K., Winnewisser, G. **121**, L13
- Ammonia as a molecular cloud thermometer
Walmsley, C.M., Ungerechts, H. **122**, 164
- Does CO condense on dust in molecular clouds?
Léger, A. **123**, 271
- Clumping in Orion KL: 2-arcsecond maps of ammonia
Pauls, T.A., Wilson, T.L., Bieging, J.H., Martin, R.N. **124**, 23
- Structure of molecular clouds. VII. Energy balance in clouds with star formation (Type IIb)
Stenholm, L.G. **124**, 247
- The magnetic field of the NGC 2024 molecular cloud: detection of OH line Zeeman splitting
Crutcher, R.M., Kazès, I. **125**, L23
- 3-D simulations of the collapse of nonspherical interstellar clouds
Rozyczka, M. **125**, 45

H₂-densities and masses of the molecular clouds close to the galactic center

Güsten, R., Henkel, C. **125**, 136

A comparison of high resolution optical and radio observations of W 3

Dickel, H.R., Harten, R.H., Gull, T.R. **125**, 320

Observations of SO₂ and HCS⁺ in cold molecular clouds

Irvine, W.M., Good, J.C., Schloerb, F.P. **127**, L10

Formaldehyde towards compact H II: densities and isotope ratios

Henkel, C., Wilson, T.L., Walmsley, C.M., Pauls, T. **127**, 388

Mid-infrared maps of the Orion molecular cloud core

Lee, T.J., Beattie, D.H., Geballe, T.R., Pickup, D.A. **127**, 417

Observations of microwave transitions of A-state acetaldehyde in Sgr B2

Bell, M.B., Matthews, H.E., Feldman, P.A. **127**, 420

Far-infrared spectrophotometry of the Orion Molecular Cloud I ridge

Drapatz, S., Haser, L., Hofmann, R., Oda, N., Iyengar, K.V.K. **128**, 207

Clumping in molecular clouds. The region between OMC1 and 2

Batrla, W., Wilson, T.L., Bastien, P., Ruf, K. **128**, 279

The isotopic abundance of interstellar oxygen derived from 18-cm line observations

Bujarrabal, V., Cernicharo, J., Guélin, M. **128**, 355

Molecules, see also Interstellar Clouds, OH Sources, Radio Frequency Lines: Molecular Lines

On the Formation and Destruction of He H⁺ in Gaseous Nebulae and the Associated Infra-red Emission Line Spectrum

Flower, D.R., Roueff, E. **72**, 361

Chemical and Thermal Equilibrium in Dark Clouds. II. Importance of Grain Surface Reactions for Molecular Formation

Viala, Y.P., Bel, N., Clavel, J. **73**, 174

Electron Collisional Excitation of Rotational Transitions in CH⁺ and HeH⁺

Flower, D.R. **73**, 237

TiH in M-type Stars and Sunspots

Yerle, R. **73**, 346

Theoretical Evaluation of the Distribution of ¹³C in Cyanoacetylene at Thermodynamic Equilibrium

Wolfsberg, M., Bopp, P., Heininger, K., Mallinson, P.D. **74**, 369

Infra-red Molecular Line Emission from Grain Surfaces in Dense Clouds

Allamandola, L.J., Norman, C.A. **77**, 261

Transitions in A-Doublets of Molecules Induced by Collisions with Ions. II.

Bouloy, D., Omont, A. **77**, 373; **38**, 101

Analytical Results for Interstellar Shocks

Elitzur, M. **81**, 351

A Survey of Nearby Galaxies for CO

Rowan-Robinson, M., Phillips, T.G., White, G. **82**, 381

Rotational Excitation of OH by H₂ at Interstellar Temperatures

Flower, D.R. **83**, 33

On the Identification Problem of the Infrared "Keenan Bands" in S Stars

Lindgren, B., Olofsson, G. **84**, 300

Interstellar Molecules: Hydrocarbon Formation on Graphite Grains at T ≥ 7 K

Bar-Nun, A., Litman, M., Rappaport, M.L. **85**, 197

Infra-red Absorption Lines by Molecules in Grain Mantles

Hagen, W., Allamandola, L.J., Greenberg, J.M. **86**, L1

Molecular Spectroscopy in Sunspots, Theoretical Interpretation of TiO Line Equivalent Width Measurements

Boyer, R. **86**, 267; **40**, 277

Iron Hydrides Formation in Interstellar Clouds

Bar-Nun, A., Pasternak, M., Barrett, P.H. **87**, 328

Modeling of Diffuse Interstellar Clouds: the Case of Gamma Arae

Federman, S.R., Glassgold, A.E. **89**, 113

CO Observations of Interstellar Clouds: Isotopic Ratios

Combes, F., Falgarone, E., Guibert, J., Nguyen-Q-Rieu **90**, 88

Hydrostatic Models of Molecular Clouds. I. Steady State Models

de Jong, T., Dalgarno, A., Boland, W. **91**, 68

Population Inversion and Suprathermal Excitation in Carbon Monoxide

Köppen, J., Kegel, W.H. **91**, 262; **42**, 59

Identification of the CrH Molecule in a Sunspot Spectrum

Engvold, O., Wöhl, H., Brault, J.W. **91**, 380; **42**, 209

Deuterium in the Solar System

Geiss, J., Reeves, H. **93**, 189

A Molecular Line Study of the Elongated Dark Dust Cloud TMC 1

Tölle, F., Ungerechts, H., Walmsley, C.M., Winnewisser, G., Churchwell, E. **95**, 143

The OH⁺ Molecule in Interstellar Clouds Absolute Oscillator Strengths and Equivalent-widths for OH⁺ (A³Π₁-X³Σ⁻) Bands

de Almeida, A.A., Singh, P.D. **95**, 383

Erosion Yields of 4 K N₂ Frozen Gas by MeV Helium Ions

Pirronello, V., Strazzulla, G., Foti, G., Rimini, E. **96**, 267

Intensities of Various Bands of the Molecules CN, CN⁺, and CS in Comets

Krishna Swamy, K.S. **97**, 110

Searches for Interstellar Imidazole and Cyanoforn

Irvine, W.M., Elldér, J., Hjalmarsen, Å., Kollberg, E., Rydbeck, O.E.H., Sørensen, G.O., Bak, B., Svanholt, H. **97**, 192

A Search for the λ 1.35-cm Line of H₂O in Comets Kohler (1977 XIV) and Meier (1978 XXI)

Crovisier, J., Despois, D., Gérard, E., Irvine, W.M., Kazès, I., Robinson, S.E., Schloerb, F.P. **97**, 195

Thermal Overlap Effects and Collision Models: HCN

Guilloteau, S., Baudry, A. **97**, 213

A Potential Interstellar Species: CS⁺

Quarta, M.L., Singh, P.D. **98**, 384

Detection of Interstellar C₂ toward Cygnus OB 2 No 12, ζ Persei, o Andromedae, ζ Ophiuchi, and v Cygni

Cosmovici, C.B., Strafella, F. **98**, 408

H₂O Masers Associated with Bright Nebulosities in Dark Clouds

Sandell, G., Olofsson, H. **99**, 80

The Abundance and Excitation of the Carbon Chains in Interstellar Molecular Clouds

Bujarrabal, V., Guélin, M., Morris, M., Thaddeus, P. **99**, 239

Charge Exchange and Fine Structure Excitation in 0-D⁺ Collisions

Roueff, E. **99**, 394

Accurate ab initio Calculation of the HCS⁺ System

Chekir, S., Pauzat, F., Berthier, G. **100**, L14

Molecule Formation in Interstellar Clouds by Gas Phase Reactions

Henning, K. **100**, 333; **44**, 405

Distribution of Molecular Gas in Three Face-on Galaxies

Rickard, L.J., Palmer, P. **102**, L13

Collisional and Radiative Excitation of SiO Masers

Bujarrabal, V., Nguyen-Q-Rieu **102**, 65

- CO ($J=2 \rightarrow 1$) Observations of Southern H II Regions
de Graauw, T., Lidholm, S., Fitton, B., Beckman, J., Israel, F.P., Nieuwenhuijzen, H., Vermue, J. **102**, 257
- Highly Excited OH in W 3 (OH)
Baudry, A., Walmsley, C.M., Winnberg, A., Wilson, T.L. **102**, 287
- H₂ Production in Dense Molecular Clouds
Pirronello, V., Strazzulla, G., Foti, G. **103**, L5
- Ammonia in the Neighbourhood of the Galactic Center
Güsten, R., Walmsley, C.M., Pauls, T. **103**, 197
- Observations of HCO⁺, H¹³CO⁺, ¹³CO and C¹⁸O in Taurus Cloudlets
Baudry, A., Cernicharo, J., Péroult, M., de la Noë, J., Despois, D. **104**, 101
- Ammonia in Orion. II. The Gas in and Around OMC-1
Ziurys, L.M., Martin, R.N., Pauls, T.A., Wilson, T.L. **104**, 288
- A Search for C₂ Features in the Hydrogen-poor Carbon Star HD 182040
Wallerstein, G. **105**, 219
- Note sur le spectra de la Comète 1980 u
Huang Chang-Chun **106**, 179; **46**, 369
- Spectra of the Red (2,0) CN Band in 31 G and K Giant Stars
Kjaergaard, P., Walker, G.A.H., Yang, S. **106**, 180; **46**, 375
- Table of Solar Diatomic Molecular Lines. IV. Spectral Range: 7600-8100
Boyer, R., Sotirovski, P., Harvey, J.W. **106**, 181; **47**, 145
- Molecular Abundances in IRC+10216
Lafont, S., Lucas, R., Omont, A. **106**, 201
- Formaldehyde Emission from DR21(OH)
Wilson, T.L., Martin-Pintado, J., Gardner, F.F., Henkel, C. **107**, L10
- Classical Rigid-ellipsoid model for Collisions of H₂ with HC₃N and HC₉N
Bhattacharyya, S.S., Dickinson, A.S. **107**, 26
- The State of Ionization in Dense Molecular Clouds
Guélin, M., Langer, W.D., Wilson, R.W. **107**, 107
- High Sensitivity Molecular Line Observations of IRC + 10216
Olofsson, H., Johansson, L.E.B., Hjalmarson, Å., Nguyen-Quang-Rieu **107**, 128
- H₂O Masers - Survey of the Galactic Plane. II
Braz, M.A., Scalise, E. Jr. **107**, 272
- Infrared Bands of C₂ in the Solar Photospheric Spectrum
Brault, J.W., Delbouille, L., Grevesse, N., Roland, G., Sauval, A.J., Testerman, L. **108**, 201
- A Model of a Comet Coma with Interstellar Molecules in the Nucleus
Biermann, L., Giguere, P.T., Huebner, W.F. **108**, 221
- Tentative Identification of CS⁺ in Comets
Singh, P.D. **108**, 369
- Interstellar Grain Explosions: Molecule Cycling Between Gas and Dust
d'Hendecourt, L.B., Allamandola, L.J., Baùs, F., Greenberg, J.M. **109**, L12
- Astronomical Study of the C₃N and C₄H Radicals: Hyperfine Interactions and Rho-type Doubling
Guélin, M., Friberg, P., Mezaoui, A. **109**, 23
- Evaluation of Infrared Line Emission from Constituent Molecules of Cometary Nuclei
Yamamoto, T. **109**, 326
- Ortho-to-Para Ratios in Interstellar Ammonia
Wilson, T.L., Batrla, W., Pauls, T.A. **110**, L20
- The Temperature Dependence of the HCO⁺/DCO⁺ Abundance Ratio in Dense Interstellar Clouds
Herbst, E. **111**, 76
- NH₃ and H₂O in the S106 Molecular Cloud
Stutzki, J., Ungerechts, H., Winniewisser, G. **111**, 201
- Molecules in Red-giant Stars. I. Column Densities in Models for K and M Stars
Johnson, H.R., Sauval, A.J. **111**, 210; **49**, 77
- OH Observations of NH₃ Sources
Little, L.T., Cesarsky, D.A. **112**, 49
- Formaldehyde Absorption Measurements of Selected Galactic Molecular Clouds
Biegging, J., Wilson, T.L., Downes, D. **112**, 394; **49**, 607
- On the "Just Overlapping Line Approximation" for Molecular Absorption
Zeidler-K.T., E.-M., Koester, D. **113**, 173
- Dynamic Coma Models for Comet Bennet 1970 II
Cucchiari, A., Malaise, D. **114**, 102
- Model Calculations of the Molecular Composition of Interstellar Grain Mantles
Tielens, A.G.G.M., Hagen, W. **114**, 245
- Loss of CO⁺ Ions by Reaction with H₂ in OMC-1
Huntress, W.T., Jr., Prasad, S.S., Kemper, P.R., Cates, R.D., Bowers, M.T. **114**, 275
- On the Spectrum of Comet Bradfield 1980r
Cosmovici, C.B., Barbieri, C., Bonoli, C., Bortoletto, F., Hamzaoglu, E. **114**, 373
- Detection of the (8,8) and (9,9) Absorption Lines of Ammonia: The Hot Molecular Cloud Toward Sgr B2
Wilson, T.L., Ruff, K., Walmsley, C.M., Martin, R.N., Pauls, T.A., Batrla, W. **115**, 185
- Vibration-rotation transition probabilities for the ground electronic X¹Σ⁺ state of HD
Abgrall, H., Roueff, E., Viala, Y. **117**, 172; **50**, 505
- Six-centimeter H₂CO observations: envelopes of dark clouds
Vanden Bout, P.A., Snell, R.L., Wilson, T.L. **118**, 337
- H₂ production in comets
Pirronello, V., Strazzulla, G., Foti, G. **118**, 341
- Fourier spectroscopy of the ¹²C¹³C and ¹³C₂ Phillips system
Amiot, C., Verges, J. **119**, 164; **51**, 257
- Surface chemistry of deuterated molecules
Tielens, A.G.G.M. **119**, 177
- Detection of HCO⁺ and HCN absorption towards three galactic H II-regions
Nyman, L.-Å. **120**, 307
- The nuclear hyperfine structure of deuterated ammonia
Bester, M., Urban, S., Yamada, K., Winniewisser, G. **121**, L13
- Hydrogen sulfide in a circumstellar envelope
Ukita, N., Morris, M. **121**, 15
- Infrared and microwave fluorescence of carbon monoxide in comets
Crovisier, J., Le Bourlot, J. **123**, 61
- Physical and chemical effects induced by energetic ions on comets
Strazzulla, G., Pirronello, V., Foti, G. **123**, 93
- Does CO condense on dust in molecular clouds?
Léger, A. **123**, 271
- Interstellar C₂ in the Ophiuchus clouds
Danks, A.C., Lambert, D.L. **124**, 188
- Ammonia toward DR21: a weak maser in ortho-NH₃?
Guilloteau, S., Wilson, T.L., Martin, R.N., Batrla, W., Pauls, T.A. **124**, 322

Tentative detection of the CS^+ molecular ion in diffuse interstellar clouds

Ferlet, R., Roueff, E., Horani, M., Rostas, J. **125**, L5

Infrared fluorescence of molecules in comets: the general synthetic spectrum

Crovisier, J., Encrenaz, Th. **126**, 170

Non-metastable ammonia absorption toward compact HII regions

Wilson, T.L., Mauersberger, R., Walmsley, C.M., Batrla, W. **127**, L19

The physical structure of the globule B 335

Krügel, E., Stenholm, L.G., Steppe, H., Sherwood, W.A. **127**, 195

Approximated collisional rates for $\text{CS}-\text{H}_2$ ($J=0$)

Albrecht, M.A. **127**, 409

Water vapour absorption at $2.7 \mu\text{m}$ from M-type Mira variables

Iyengar, K.V.K., Ghosh, S.K., Tandon, S.N. **128**, 255

Conversion formulas between radiative lifetimes and other dynamical variables for spin-allowed electronic transitions in diatomic molecules

Larsson, M. **128**, 291

The shock-induced variability of the H α emission profile in Mira

Gillet, D., Maurice, E., Baade, D. **128**, 384

Monte Carlo Method

A Monte Carlo Approach to Non-LTE Radiation Transfer Problems

Bernes, C. **73**, 67

Monte Carlo Analysis of Polarization by Thomson Scattering in Circumstellar Envelopes

Daniel, J.Y. **86**, 198

Monte Carlo Analysis of Polarization by Mie Scattering in Circumstellar Envelopes

Daniel, J.-Y. **87**, 204

Moon

Scale Invariance, Metrical Connection, and the Motions of Astronomical Bodies

Maeder, A., Bowier, P. **73**, 82

The ELP Solution of the Main Problem of the Moon

Chapront-Touzé, M. **83**, 86

The Main Problem of the Motion of the Moon: Comparison Between Two Theories

Chapront-Touzé, M., Henrard, J. **86**, 221

A New Algorithm to Determine Image Edges. Application to Lunar Craters

Bijaoui, A., Froeschlé, M. **87**, 250

Planetary Perturbations of the Moon. Comparison of ELP-1900 with Brown's Theory

Chapront-Touzé, M., Chapront, J. **91**, 233

Theorie des mouvements de la Lune et des satellites en variables de Laplace

Lestrade, J.-F. **92**, 302

Positions d'astéroïdes, de grosses planètes et de la Lune

Soulié, G., Dupouy, Teulet, Broqua, Dulou **95**, 211; **43**, 146

Comparison of ELP-2000 to a JPL Numerical Integration

Chapront, J., Chapront-Touzé, M. **103**, 295

Orientation of the JPL Ephemerides, DE 200/LE 200, to the Dynamical Equinox of J 2000

Standish, E.M., Jr. **114**, 297

Relativistic Perturbations of the Moon in ELP 2000

Lestrade, J.F., Chapront-Touzé, M. **116**, 75

Perturbations due to the shape of the Moon in the lunar theory ELP 2000

Chapront-Touzé, M. **119**, 256

The lunar ephemeris ELP 2000

Chapront-Touzé, M., Chapront, J. **124**, 50

DE 102: a numerically integrated ephemeris of the Moon and planets spanning forty-four centuries

Newhall, X.X., Standish, E.M. Jr., Williams, J.G. **125**, 150

Multiple Stars

Visual Measures of 193 Double and Multiple Stars

Wilson, Jr., R.H. **71**, 273; **35**, 193

The Orbital Evolution of Close Triple Systems: The Binary Eccentricity

Mazeh, T., Shaham, J. **77**, 145

Orbital Inclination and Masses Newly Determined from the Triple System Algol

Bonneau, D. **80**, L11

Two-colour Photometry of the Eclipsing Binary IU Aur

Pettersen, B.R. **80**, 265

Geometry and Dynamics of the Algol System

Söderhjelm, S. **89**, 100

Period Changes in Close Binaries Caused by the Presence of a Third Companion

Havnes, O. **92**, 151

Evidence for a Third Component in the U CrB System

Van Gent, R.H. **110**, 183; **48**, 457

Narrow Band Photometry, see Clusters, open; Galaxies, optical Observations; Photometry

Nearby Stars, see Solar Neighborhood

Nebulae, see also Crab Nebula, H II Regions, Interstellar Clouds, Orion Nebula, Reflection Nebulae, Supernovae and Supernova Remnants

Photoionization Models for Gaseous Nebulae

Köppen, J. **71**, 271; **35**, 111

On the Formation and Destruction of He H^+ in Gaseous Nebulae and the Associated Infra-red Emission Line Spectrum

Flower, D.R., Roueff, E. **72**, 361

Balmer Line Photometry of the 30 Doradus Nebula

Strauss, F.M., Braz, M.A., Ducati, J.R. **74**, 280

C III Observable with IUE

Nussbaumer, H., Schild, H. **75**, L17

High Resolution Radio Observations of Bright Rims in IC 1396

Matthews, H.E. **75**, 345

Morphology of an Emission-line Nebulosity Associated with C 120

Heckman, T., Balick, B. **76**, L7

Dynamical Evolution of Spherical Gas-dust Nebulae Including Diffusion Effects

Gail, H.-P., Sedlmayr, E. **76**, 158

Formaldehyde Kinematics and Distribution near the Cone Nebula and IR Source in NGC 2264

Greenberg, J.M., Minn, Y.K., Tielens, A.G.G.M. **78**, 100

Optical Extinction and Surface Brightness Observations of the Dark Nebulae Lynds 134 and Lynds 1778/1780

Mattila, K. **78**, 253

Observations of Neutral Hydrogen and OH in the Dark Nebula Lynds 1778/1780

Mattila, K., Sandell, G. **78**, 264

OH Observations of the Dark Nebula Lynds 134

Mattila, K., Winnberg, A., Grasshoff, M. **78**, 275

Photoionization Models for Gaseous Nebulae. II. Optically Thin Condensations

Köppen, J. **80**, 42

Photoionization Models for Gaseous Nebulae: III. Third Period Elements

Köppen, J. **81**, 389; **39**, 77

The Nature of the Core of the 30 Doradus Nebula from New Optical Observations

Cantó, J., Elliott, K.H., Goudis, C., Johnson, P.G., Mason, D., Meaburn, J. **84**, 167

Photométrie Photoélectrique de Nébuleuses Gazeuses Diffuses dans la Raie H α

Vidal, J.L. **84**, 268; **40**, 33

The Calculation of the Optical Spectra of NGC 6888

Contini, M., Shaviv, G. **88**, 117

Aperture Synthesis Observations of the NGC 7000/IC 5070 Complex at 610 MHz

Matthews, H.E., Goss, W.M. **88**, 267

Studies of the Carina Nebula. II. The Extinction Law in the Direction of 14 O-type Stars

Thé, P.S., Bakker, R., Tjin A Djie, H.R.E. **89**, 209

The Spectrum and the Structure of the Bipolar Nebula S 106

Solf, J. **92**, 51

Wavelengths and Profiles of the [S III] $^3P_{2,1}-^1D_2$ Lines in Some Emission Nebulae

Hippelein, H., Münch, G. **95**, 100

O III: Intercombination and Forbidden Lines

Nussbaumer, H., Storey, P.J. **99**, 177

I and R Image Tube Photographs of AFCRL Sources

Eiroa, C. **99**, 203; **44**, 77

Small Nebulae and Herbig-Haro Objects. I. A Survey of Southern Dark Clouds

Reipurth, B. **100**, 333; **44**, 379

Studies of the Carina Nebula. V. The near infrared excess of O-type stars and the anomalous extinction law in their environment

Thé, P.S., Groot, M. **125**, 75

Dielectronic recombination at low temperatures

Nussbaumer, H., Storey, P.J. **126**, 75

A modified method to calibrate photographic surface photometry of galaxies and nebulae

Feitzinger, J.V., Nicolov, A., Schmidt-Kaler, T., Tennigkeit, J. **126**, 352

Rosette Nebula

A Continuum Study of Galactic Radio Sources in the Constellation of Monoceros

Graham, D.A., Haslam, C.G.T., Salter, C.J., Wilson, W.E. **109**, 145

Neptune

The Effects of Seeing on the Reflected Spectrum of Uranus and Neptune

Münch, G., Hippelein, H. **81**, 189

The Sun among the Stars. IV. Albedos of Uranus and Neptune and the Solar Color

Hardorp, J. **96**, 123

Orbital Elements of Nereid from New Observations

Veillet, C. **112**, 277

Network, see Solar Chromosphere

Neutrinos

Dirty Solar Models

Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **73**, 121

Dirac's Cosmology: Solar Models to Test Two Hypotheses of Matter Creation

Carignan, C., Beaudet, G., Sirois, A. **75**, 291

The Dependence of Statistical Results from N-Body Calculations on N

Smith, H. Jr. **76**, 192

Erratum: Dirty Solar Models

Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **79**, 260

Periodic Planetary-type Orbits of the General 4-Body Problem with an Application to the Satellites of Jupiter

Hadjidemetriou, J.D., Michalodimitrakis, M. **93**, 204

Heavy Right-handed Neutrinos and the Early Universe

Klinkhamer, F.R., Branco, G., Derendinger, J.P., Hut, P., Masiaro, A. **94**, L19

Stellar Evolution with Turbulent Diffusion Mixing. III. The Solar Model and the Neutrino Problem

Schatzman, E., Maeder, A., Angrand, F., Glowinski, R. **96**, 1

The Solar Neutrino Problem

Opher, R. **98**, 39

Neutrino Dating of the Galaxy Formation Epoch

Berezinsky, V.S., Ozernoy, L.M. **98**, 50

Constraints on Leptonic Asymmetry and Cosmological Constant from Neutrino Rest Mass

Luminet, J.-P., Schneider, J. **98**, 412

A Possible Capture Process for the Solar Central Black Hole

Picchio, G. **99**, 31

Gravitational Energy Release Induced by the Nuclear Energy Generation Processes: The Resolution of the Solar Neutrino Dilemma

Rouse, C.A. **102**, 8

A Comparison of Simulated Galaxy Clustering Models with Observations

Zieba, S., Urbanik, M., Rudnicki, K., Aarseth, S.J. **105**, 21

The Solar Neutrino Problem

Taylor, J.B., Connor, J.W. **107**, L1

Neutrino Cyclotron Radiation from Superfluid Vortexes in Neutron Stars: A New Mechanism for Pulsar Spin Down

Qiu-He Peng, Ke-Liang Huang, Jie-Hao Huang **107**, 258

Detection of Solar and Cosmic Neutrinos by Coherent Scattering

Opher, R. **108**, 1

Evolution of Rich Clusters of Galaxies

Roos, N., Aarseth, S.J. **114**, 41

Massive Neutrino Halos in an Expanding Universe

Fabbri, R., Jantzen, R.T., Ruffini, R. **114**, 219

Galactic Neutrino Models

Rephaeli, Y. **114**, 405

On semi-degenerate equilibrium configurations of a collisionless self-gravitating Fermi gas

Ruffini, R., Stella, L. **119**, 35

Gravitational lens effects of neutrino astronomical objects

Chongming, X., Xuejun, W. **120**, 15

Ionization curves and last scattering surfaces in neutrino-dominated universes

Bonometto, S., Lucchin, F., Occhionero, F., Vittorio, N. **123**, 118

Comments on the solar neutrino problem

Opher, R. **125**, L9

- Transport properties of neutrinos in stellar collapse. I. Bulk viscosity of collapsing stellar cores
van den Horn, L.J., van Weert, C.G. **125**, 93
- Neutrino energy production spectra in a relativistic plasma
Giovannelli, F., Karakula, S., Tkaczyk, W. **125**, 121
- Neutrino emission from black holes
Giovannelli, F., Karakula, S., Tkaczyk, W. **125**, 126
- On the statistical distribution of massive fermions and bosons in a Friedmann universe
Ruffini, R., Song, D.J., Stella, L. **125**, 265
- Calculation of stellar structure. III. Solar models that satisfy the necessary conditions for a unique solution to the stellar structure equations
Rouse, C.A. **126**, 102
- Neutron Stars**, see also Pulsars
- Highly Compact Binary X-ray Sources
Joss, P.C., Rappaport, S. **71**, 217
- Gravitational Redshift According to the Bi-metric Theory of Gravitation
Falik, D., Opher, R. **71**, 332
- Application of an Energy Density Mass Formula to Neutron-rich Nuclei in Neutron Star Matter
Tondeur, F. **72**, 88
- Formation of Neutron Star Binaries and Their Importance for Gravitational Radiation
Clark, J.P.A., van den Heuvel, E.P.J., Sutantyo, W. **72**, 120
- Supercritical Accretion on to Unmagnetized Neutron Stars and the Galactic Bulge X-ray Sources
Jones, B.C., Raine, D.J. **76**, 179
- Approximate Formulae for Electron Scattering in a Strong Magnetic Field
Börner, G., Mészáros, P. **77**, 178
- Thermal Radiation from Highly Magnetized Neutron Stars
Brinkmann, W. **82**, 352
- Accretion by Neutron Stars: Accretion Disk and Rotating Magnetic Field
Anzer, U., Börner, G. **83**, 133
- Quark Core in Neutron Stars. I
Alvarez, E. **84**, 7
- Hydrogen and Helium Flashes in the Envelopes of Accreting Neutron Stars
Ergma, E.V., Tutukov, A.V. **84**, 123
- Electrodynamics of Disk Accretion onto Magnetic Neutron Star
Aly, J.J. **86**, 192
- "Solar Flares" on Neutron Stars and Degenerate Dwarfs
Tsygan, A.I. **87**, 224
- Evolution of a Blue Supergiant with a Neutron Star Companion Immersed in Its Envelope
Delgado, A.J. **87**, 343
- Characteristics of the Cen X-3 Neutron Star from Correlated Spin-up and X-ray Luminosity Measurements
van der Klis, M., Bonnet-Bidaud, J.M., Robba, N.R. **88**, 8
- Compressibility of Cold Catalyzed Matter
Haensel, P. **90**, 70
- Plasma Infall and X-ray Production in the Magnetic Funnel of an Accreting Neutron Star
Wang, Y.-M., Frank, J. **93**, 255
- Cyg X-1: A Massive Neutron Star?
Goldman, I. **97**, 219
- Relativistic Effects in the Hydrodynamics of the Superfluid Component of a Neutron Star
Rothen, F. **98**, 36
- Do Neutron Star Magnetic Fields Decay
Kundt, W. **98**, 207
- Quark Core in Neutron Stars. II
Alvarez, E., Ibáñez, J.M. **98**, 390
- Uncertainty in the Saturation Density of Nuclear Matter and Neutron Star Models
Haensel, P., Kutschera, M., Prószyński, M. **102**, 299
- Some Remarks on the Spectra of X-ray Bursts
van Paradijs, J. **107**, 51
- Changing Orientation of Dipole and Spin Axes in Binary X-ray Pulsars
Wang, Y.-M., Robnik, M. **107**, 222
- Neutrino Cyclotron Radiation from Superfluid Vortexes in Neutron Stars: A New Mechanism for Pulsar Spin Down
Qiu-He Peng, Ke-Liang Huang, Jie-Hao Huang **107**, 258
- The Fokker-Planck Equation for the Radiation Transfer in a Strongly Magnetized Plasma
Bonazzola, S. **108**, 19
- Some Constraints on the Evolutionary History of the Binary Pulsar PSR 1913+16
Srinivasan, G., van den Heuvel, E.P.J. **108**, 143
- On the Possibility of Observing Iron Line Emission from the Surface of Magnetized Neutron Stars
Yahel, R.Z. **109**, 1
- The Anomalous Braking Index of the Crab Pulsar: A Plasma Inertial Effect
Heintzmann, H., Schröfer, E. **111**, L4
- Hydrogen-Helium Flashes on Accreting Neutron Stars as a Possible Origin of Gamma-ray Bursts
Hameury, J.M., Bonazzola, S., Heyvaerts, J., Ventura, J. **111**, 242
- Thermal X-ray Emission from Isolated Older Pulsars: A New Heating Mechanism
Huang, J.-H., Lingenfelter, R.E., Peng, Q.-H., Huang, K.-L. **113**, 9
- Plasma-magnetospheric Interaction in X-ray Sources: An Analysis of the Linear Kelvin-Helmholtz Instability
Wang, Y.-M., Welter, G.L. **113**, 113
- Cyclotron Emission in Strongly Magnetized Plasmas
Herold, H., Ruder, H., Wunner, G. **115**, 90
- Nuclear Forces and the Properties of Matter at High Temperature and Density
Rayet, M., Arnould, M., Tondeur, F., Paulus, G. **116**, 183
- Solid white dwarfs, neutron stars and type I supernovae
Labay, J., Canal, R., Isern, J. **117**, L1
- Cross sections for photo-ionisation and photo-recombination of hydrogenic atoms in strong magnetic fields
Wunner, G., Ruder, H., Herold, H., Schmitt, W. **117**, 156
- Coulomb bremsstrahlung and cyclotron emissivity in hot magnetized plasmas
Nagel, W., Ventura, J. **118**, 66
- Helium cyclotron emission from accreting magnetized neutron stars
Apparao, K.M.V., Chitre, S.M. **121**, L1
- Gravitational settling in layers accreted on neutron stars and its relations to gamma ray bursts
Hameury, J.M., Heyvaerts, J., Bonazzola, S. **121**, 259
- Accretion onto rotating, magnetic neutron stars: the inner edge of the disk
Anzer, U., Börner, G. **122**, 73
- Phase transitions in dense stars
Díaz Alonso, J. **125**, 287

Phase transitions in stellar cores. I. Equilibrium configurations

Schaeffer, R., Haensel, P., Zdunik, L. **126**, 121

Propagation of high frequency waves in strongly magnetized plasmas. Mode ambiguities due to vacuum polarization

Soffel, M., Ventura, J., Herold, H., Ruder, H., Nagel, W. **126**, 251

Fine time structure in the 1979 March 5 gamma ray burst

Barat, C., Hayles, R.I., Hurley, K., Niel, M., Vedrenne, G., Desai, U., Estulin, I.V., Kurt, V.G., Zenchenko, V.M. **126**, 400

Detection of magnetomultipole radiation from neutron stars

Lipunov, V.M. **127**, L1

Corequake and shock heating model of the 5 March 1979 gamma ray burst

Ellison, D.C., Kazanas, D. **128**, 102

Magnetohydrostatics in the polar caps of the γ ray burst sources

Hameury, J.M., Bonazzola, S., Heyvaerts, J., Lasota, J.P. **128**, 369

Night Sky

Synthetic Spectrum of the Integrated Starlight Between 3000 and 10000 Å. Part I. Method of Calculation and Results

Mattila, K. **81**, 388; **39**, 53

Synthetic Spectrum of the Integrated Starlight between 3,000 and 10,000 Å. Part II. Discussion

Mattila, K. **82**, 373

Non-LTE

The O1 Triplet λ 7773 Å in Late-type Giant Stars

Eriksson, K., Toft, S.C. **71**, 178

A Monte Carlo Approach to Non-LTE Radiation Transfer Problems

Bernes, C. **73**, 67

LTE and Non-LTE Abundance Analyses of Nitrogen Deficient Supergiants in a Loose Association

Dufton, P.L. **73**, 203

Non-LTE Transfer with Convective Transport of Excited Atoms

Oxenius, J. **76**, 312

Spherical Extended Non-LTE Model Atmospheres of Low Gravity. Subluminous O-stars

Gruschinske, J., Kudritzki, R.P. **77**, 341

Copernicus Observations of Neutral Helium Lines in Early-type Stars

Dufton, P.L., McKeith, C.D. **81**, 8

Non-LTE Transfer. V. The Asymptotics of Partial Redistribution

Frisch, H. **83**, 166

Non-LTE Analysis of the O 3-star HD 93250

Kudritzki, R.-P. **85**, 174

Charge Transfer $C + H^+ = C^+ + H$ and the C1 λ 1101 Absorption Edge in A Stars

Che, A., Baschek, B. **86**, L7

The Effect of Lyman-alpha on the Non-LTE Model Atmospheres of A Type Stars

Hubeny, I. **86**, 225

Broadening of Non-LTE Lines by a Turbulent Velocity Field with a Finite Correlation Length

Froeschlé, Ch., Frisch, H. **91**, 202

The Formation of Na I Spectral Lines in the Solar Atmosphere

Caccin, B., Gomez, M.T., Roberti, G. **92**, 63

Multidimensional Radiative Transfer in Stratified Atmospheres.

III. Non-LTE Line Formation

Kneer, F. **93**, 387

Non-LTE Calculations of N II Line Strengths in B-Type Stars

Dufton, P.L., Hibbert, A. **95**, 24

NON-LTE Analysis of Subluminous O-stars. IV. Spectral Photometry and NLTE Analysis of 11 Subluminous Stars

Hunger, K., Gruschinske, J., Kudritzki, R.P., Simon, K.P. **95**, 244

On the Stimulated Emission Terms in Partial Redistribution Calculations

Baschek, B., Mihalas, D., Oxenius, J. **97**, 43

Non-LTE Analysis of the Ultraviolet Spectrum of A Type Stars.

I. Copernicus Observations of the Ly α Profile in Vega (A0 V)

Praderie, F. **98**, 92

Non-LTE Analysis of the Ultraviolet Spectrum of A Type Stars.

II. Theoretical Considerations and Interpretation of the Vega Lyman-alpha Region

Hubeny, I. **98**, 96

On the Importance of Convective Transport of Excited Atoms in Stellar Atmospheres

Hubeny, I. **100**, 314

A Spectral Description and Non-LTE Analysis of 6 Central Stars of Planetary Nebulae

Méndez, R.H., Kudritzki, R.P., Gruschinske, J., Simon, K.P. **101**, 323

Mass Loss from O Subdwarfs

Hamann, W.-R., Gruschinske, J., Kudritzki, R.P., Simon, K.P. **104**, 249

Non-LTE analysis of massive O stars. III. The O 3 stars HD 93128, HD 93129 A, and HDE 303308

Simon, K.P., Jonas, G., Kudritzki, R.P., Rahe, J. **125**, 34

North Polar Spur, see Galactic Structure

Novae and Nova-like Variables, see also Dwarf Novae

The Evolution of a Fast Nova Model with a $Z=0.03$ Envelope from Pre-explosion to Decline

Prialnik, D., Shara, M.M., Shaviv, G. **72**, 192

VBLUW Photometry of the Novae Aql 1975 (V 1301 Aql), Sct 1975 (V 373 Sct), LMC 1977 b, and Ser 1978

van Genderen, A.M., Uiterwaal, G.M. **73**, 369; **36**, 265

On the Ultraviolet Spectrum of Nova Cygni 1978

Cassatella, A., Benvenuti, P., Clavel, J., Heck, A., Penston, M., Selvelli, P.L., Macchetto, F. **74**, L18

Colour Behaviour and Physical Characteristics of the Novae V 1500 Cyg, HR Del, FH Ser, LV Vul, and NQ Vul. I. Derivation and Application of the Two-colour Method

Duerbeck, H.W., Seitter, W.C. **75**, 297

On the 3 Hour Variation of Nova Cygni 1975

Kleine, T., Kohoutek, L. **76**, 133

The Continuous Energy Distribution of Nova Cygni 1975

Wamsteker, W. **76**, 226

A Peculiar Nova in M 31

Dopita, M.A., Rosino, L., D'Odorico, S. **76**, 240

Upper Limits for the Li/Na Ratio in Novae

Friedjung, M. **77**, 357

Physical Conditions of the Different Regions of the Envelope of Nova HR Delphini

Malakpour, I. **78**, 7

The Linear Polarization of Nova Cygni 1978

Pirola, V., Korhonen, R. **79**, 254

Rapid Photoelectric Photometry of Nova Cygni 1978

Giuricin, G., Mardrossian, F., Mezzetti, M., Pucillo, M., Santin, P., Sedmak, G. **80**, 9

The Structure of Optically Thick Winds in Classical Novae

Ruggles, C.L.N., Bath, G.T. **80**, 97

A *UBV* Light Curve of Nova Cygni 1978

Duerbeck, H.W., Rindermann, K., Seitter, W.C. **81**, 157

The Spectrum of Nova RT Serpentis (1909) in 1964, 1975 and 1978

Fried, J.W. **81**, 182

²²Ne and ²⁶Al Nucleosynthesis in Novae and Supernovae Outbursts

Vangioni-Flam, E., Audouze, J., Chièze, J.P. **82**, 234

Infrared Observations of Kuwano's Novalike Object

Bensammar, S., Friedjung, M., Assus, P. **83**, 261

Photometry of Nova Cygni '78 (V1668 Cyg). Evidence for a Post-maximum Short Time Periodicity

Campolongo, F., Gilmozzi, R., Guidoni, U., Messi, R., Natali, G., Wells, J. **85**, L4

Fast Photoelectric Photometry of the Nova-like Variable TT Ari

Mardirossian, F., Mezzetti, M., Pucillo, M., Santin, P., Sedmak, G., Giuricin, G. **85**, 29

Detection of Periodic Light Variations in the Old Nova V 603 Aquilae (1918)

Rahe, J., Boggess, A., Drechsel, H., Holm, A., Krautter, J. **88**, L9

Infrared Emission by Dust Grains near Variable Primary Sources.

II. A Model for Infrared Novae

Bode, M.F., Evans, A. **89**, 158

Spectral Evolution of Nova Cygni 1978

Klare, G., Wolf, B., Krautter, J. **89**, 282

Light Variability of Nova Delphini 1967 in 1977 and 1979

Kohoutek, L., Pauls, R. **92**, 200

Narrow Ultraviolet Absorption Lines of Nova Cygni 1978

Friedjung, M. **93**, 320

Forbidden Lines in Hot Astronomical Sources

Eidelsberg, M., Crifo-Magnant, F., Zeippen, C.J. **97**, 417; **43**, 455

Phase-dependent Optical and Ultraviolet Observations of the Old Nova V 603 Aquilae (1918)

Drechsel, H., Rahe, J., Holm, A., Krautter, J. **99**, 166

A Study of the Spectrum of WZ Sge During Its 1978 Outburst

Friedjung, M. **99**, 226

The Old-nova GK Per (1901). I. Determination of the Orbital Period

Bianchini, A., Hamzaoglu, E., Sabbadin, F. **99**, 392

IUE Spectroscopy of Cataclysmic Variables

Krautter, J., Klare, G., Wolf, B., Duerbeck, H.W., Rahe, J., Vogt, N., Wargau, W. **102**, 337

The Old-nova GK Per. II. Optical Outbursts

Bianchini, A., Sabbadin, F., Hamzaoglu, E. **106**, 176

Spectrophotometry of Nova Coronae Austrinae 1981

Brosch, N. **107**, 300

A Photometric and Polarimetric Investigation of the Old Nova RR Pictoris

Haefner, R., Metz, K. **109**, 171

An Atlas of Southern and Equatorial Dwarf Novae

Vogt, N., Bateson, F.M. **110**, 182; **48**, 383

Diffusion of Electrons in Radio Galaxies

Valtaoja, E. **111**, 213

Forbidden Emission Lines of Fe VII

Nussbaumer, H., Storey, P.J. **113**, 21

IUE Observations of Dwarf Novae During Active Phases

Klare, G., Krautter, J., Wolf, B., Stahl, O., Vogt, N., Wargau, W., Rahe, J. **113**, 76

The UV Spectrum of the Old Nova HR Del at Different Orbital Phases

Friedjung, M., Andriat, Y., Puget, P. **114**, 351

The influence of magnetic fields on nova outbursts

Livio, M. **121**, L7

A far red spectrum of Nova LMC 1981

Andriat, Y., Dennefeld, M. **124**, 143

The old-nova GK Per (1901). III. Accretion disc models

Bianchini, A., Sabbadin, F. **125**, 112

The X-ray emission of the old Nova V 603 Aquilae (1918)

Drechsel, H., Rahe, J., Seward, F.D., Wang, Z.R., Wargau, W. **126**, 357

Nuclear Bulge, see galactic Nucleus, M 31

Light Distribution, Inclination, and Mass Distribution of M 51

Monnet, G., Patrel, G., Simien, F. **102**, 119

Nuclear Reactions, ... Synthesis

Meteoritic Anomalies and Explosive Neutron Processing of Helium-burning Shells

Thielemann, F.K., Arnould, M., Hillebrandt, W. **74**, 175

Explosive Nucleosynthesis and Meteoritic Isotope Anomalies

Chance, E.M., Harris, H.J. **74**, 247

The Effects of Binary Evolution on the Production of Heavy Elements in Massive Stars

Vanbeveren, D., Olson, G.L. **81**, 228

Some Limits on Excitation Energies of Nuclei in Hot Matter

Mazurek, T.J., Brown, G.E. **81**, 382

Nucleosynthetic Yields and the History of the Stellar Birthrate

Wheeler, J.C., Miller, G.E., Scalzo, J.M. **82**, 152

²²Ne and ²⁶Al Nucleosynthesis in Novae and Supernovae Outbursts

Vangioni-Flam, E., Audouze, J., Chièze, J.P. **82**, 234

Synthesis of Light Metals in the Galaxy. Aluminium Abundances in Cool Halo Stars

Spite, M., Spite, F. **89**, 118

Relations between Nucleosynthesis Rates and the Metal Abundance

Tinsley, B.M. **89**, 246

A Spectroscopic Study of CI Cygni: The S-process Episode

Audouze, J., Bouchet, P., Fehrenbach, Ch., Woszczyk, A. **93**, 1

Stellar Ion-induced Coulomb Enhancements of Nuclear Radiative Decay Rates

Ward, R.A. **97**, 157

A New Interpretation of the Heavy Element Abundances in Metal-deficient Stars

Truran, J.W. **97**, 391

Nucleosynthesis in an Inhomogeneous Universe Filled by Whirls

Dryzhakova, O.V., Ozernoy, L.M., Pelikhov, N.V., Vainer, B.V. **98**, 57

The r-Process During Explosive Helium Burning in Supernovae

Hillebrandt, W., Klapdor, H.V., Oda, T., Thielemann, F.K. **99**, 195

Evolution and Nucleosynthesis in Massive Stars with Mass Loss: The Yields in Helium and Heavy Elements and Constraints on the Past Star Formation Rate

Maeder, A. **101**, 385

On the Origin of the Solar-system Abundances of ¹¹³In, ¹¹⁴Sn, and ¹¹⁵Sn

Ward, R.A., Beer, H. **103**, 189

Fast Neutron Capture on ¹⁸⁰Hf and ¹⁸⁴W and the Solar Hafnium and Tungsten Abundance

Beer, H., Käppeler, F., Wisshak, K. **105**, 270

The Symbiotic Star CI Cygni: S-process Episode or Accretion Event?

Kenyon, S.J., Webbink, R.F., Gallagher, J.S., Truran, J.W. **106**, 109

Carbon, Nitrogen and Oxygen Abundances in G8-K3 Giant Stars

Kjaergaard, P., Gustafsson, B., Walker, G.A.H., Hultqvist, L. **115**, 145

The Galactic Abundance Gradient from Supernova Remnant Observations

Binette, L., Dopita, M.A., D'Odorico, S., Benvenuti, P. **115**, 315

Nuclear Forces and the Properties of Matter at High Temperature and Density

Rayet, M., Arnould, M., Tondeur, F., Paulus, G. **116**, 183

Evolution of massive pregalactic stars. I. Hydrogen and helium burning

El Eid, M.F., Fricke, K.J., Ober, W.W. **119**, 54

Evolution of massive pregalactic stars. II. Nucleosynthesis in pair creation supernovae and pregalactic enrichment

Ober, W.W., El Eid, M.F., Fricke, K.J. **119**, 61

Evolution of chemical abundances in massive stars. I. OB stars, Hubble-Sandage variables and Wolf-Rayet stars. Changes at stellar surface and galactic enrichment by stellar winds

Maeder, A. **120**, 113

Evolution of chemical abundances in massive stars. II. Abundance anomalies in Wolf-Rayet stars in relation with cosmic rays and ^{22}Ne in meteorites

Maeder, A. **120**, 130

Tidal compression of a star by a large black hole. I. Mechanical evolution and nuclear energy release by proton capture

Carter, B., Lunin, J.-P. **121**, 97

Note on technetium in stars

Schatz, G. **122**, 327

New actinide chronometer production ratios and the age of the Galaxy

Thielemann, F.-K., Metzinger, J., Klapdor, H.V. **123**, 162

The solar mercury abundance

Walter, G., Beer, H. **123**, 279

Oxygen neutronization in accreting white dwarfs

Bravo, E., Isern, J., Labay, J., Canal, R. **124**, 39

Determination of stellar neutron-capture rates for radioactive nuclei with the aid of β -delayed neutron emission

Kratz, K.-L., Ziegert, W., Hillebrandt, W., Thielemann, F.-K. **125**, 381

The Al/Mg abundance ratio in halo stars

Arpigny, C., Magain, P. **127**, L7

Nuclei of Galaxies, see also Active Galaxies, Galaxies

Star Formation and Activity in the Nuclei of Barred Galaxies

Heckman, T.M. **88**, 365

ESO 255-IG 07, a Compact Group of Interacting Galaxies

Bergvall, N., Ekman, A., Lauberts, A. **95**, 266

Bi-Dimensional $H\alpha$ Photometry Over the Nuclear Region of NGC 1068

Alloin, D., Laques, P., Pelat, D., Despiu, R. **95**, 394; **43**, 231

The Inner Regions of the Spiral Galaxy NGC 3310: Evidence for Galactic Cannibalism?

Balick, B., Heckman, T. **96**, 271

VLBI Observations of the Nucleus of the Radio Galaxy Cygnus A

Kellermann, K.I., Downes, A.J.B., Pauliny-Toth, I.I.K., Preuss, E., Shaffer, D.B., Witzel, A. **97**, L1

The Kinematics of the Nuclear Spiral of the Barred Galaxy NGC 1512

Lindblad, P.O., Jörsäter, S. **97**, 56

How to Find a Seyfert Nucleus Hidden by a Normal H II Region

Véron, P., Véron, M.P., Bergeron, J., Zuidervijk, E.J. **97**, 71

On the Width and Profile of Nuclear Emission Lines in Galaxies

Véron, M.P. **100**, 12

Detection of the 3.3 μm Emission Feature in the Nuclei of IC 4329 A and NGC 5506

Moorwood, A.F.M., Salinari, P. **100**, L16

Small-scale Structure of the Core of M33 (NGC 598)

Hua, C.T., Nguyen-Trong, T. **101**, 187

Variability of the Continuum and the Emission Lines in the Seyfert I Galaxy Akn 120

Kollatschny, W., Fricke, K.J., Schleicher, H., Yorke, H.W. **102**, L23

NGC 4507: A Weak Seyfert I and X-ray Galaxy

Véron, P., Véron, M.P., Zuidervijk, E.J. **102**, 116

Importance of the Doppler Differential Effect in the Interpretation of Active Nuclei Spectra. I. The Hydrogen Spectrum

Gordon, C., Collin-Souffrin, S., Dultzin-Hacyan, D. **103**, 69

Galaxy Mergers and Active Galactic Nuclei

Roos, N. **104**, 218

The Geometry of the Seyfert Nucleus in NGC 4151 Revisited. I. Cloudy Structure from the [O III] Line Profile Analysis

Pelat, D., Alloin, D. **105**, 335

Structure in the Universe from One Massive Neutrino?

Klinkhamer, F.R. **107**, 235

Mid-infrared Observations of Seyfert I and Narrow-line X-ray Galaxies

Glass, I.S., Moorwood, A.F.M., Eichendorf, W. **107**, 276

The Optical Spectrum of the Radio Galaxy PKS 2152-69

Marenbach, G., Appenzeller, I. **108**, 95

Optical Structure of the Nucleus of M33

Nieto, J.-L., Aurière, M. **108**, 334

High-resolution Observations of M87. I. The Morphology of the Jet

Nieto, J.-L., Lelièvre, G. **109**, 95

Non-thermal Emission from Relativistic Accretion Disks: A Simple Model for Axisymmetric Inhomogeneous Sources

Pineault, S. **109**, 294

The Radio Structure of the Nuclear Region of NGC 1365

Sandqvist, A., Jörsäter, S., Lindblad, P.O. **110**, 336

Dissipative Evolution of Collisionless Stellar Systems. I. Cooling and Heating of a Stellar System by Binary Stars

Ozernoy, L.M., Dokuchaev, V.I. **111**, 1

Dissipative Evolution of Collisionless Stellar Systems. II. Influence of Binaries on the Evolution of Globular Clusters and Galactic Nuclei

Dokuchaev, V.I., Ozernoy, L.M. **111**, 16

Are All Galactic Nuclear Regions Sodium Rich?

Véron-Cetty, M.P., Véron, P., Tarengi, M. **113**, 46

X-rays from a Peculiar Nucleus Galaxy NGC 2196

Agrawal, P.C., Singh, K.P. **113**, 73

Temperatures and Scales of Giant Cloud Complexes in the Spiral Galaxy IC 342

Ho, P.T.P., Martin, R.N., Ruf, K. **113**, 155

The Distribution of Stars Around a Black Hole: Numerical Solution of the Kinetic Equation with Collisions

Bisnovatyi-Kogan, G.S., Churayev, R.S., Kolosov, B.I. **113**, 179

VLBI Observations of the Core Sources of a Sample of Spiral Galaxies

Hummel, E., Fanti, C., Parma, P., Schilizzi, R.T. **114**, 400

Infrared Emission and Star Formation in NGC 5253

Moorwood, A.F.M., Glass, I.S. **115**, 84

Observations of emission line galaxies. I. The Seyfert-1 galaxies Mkn 1040, Mkn 1044

Rafanelli, P., Schulz, H. **117**, 109

Nuclear activity in the barred spiral galaxy NGC 3660 from radio, optical, and X-ray observations

Kollatschny, W., Biermann, P., Fricke, K.J., Huchtmeier, W., Witzel, A. **119**, 80

Tidal compression of a star by a large black hole. I. Mechanical evolution and nuclear energy release by proton capture

Carter, B., Luminet, J.-P. **121**, 97

An interpretation of the low energy γ -ray emission from Seyfert nuclei in terms of annihilation radiation from a hot plasma

Bassani, L., Dean, A.J. **122**, 83

X-ray observations of radio-jet galaxies

Miley, G.K., Norman, C., Silk, J., Fabbiano, G. **122**, 330

The [OIII] electron temperature and density structure in the nucleus of NGC 1068

Walsh, J.R. **123**, 101

A sample of 25 extragalactic radio sources having a spectrum peaked around 1 GHz

Gopal-Krishna, Patnaik, A.R., Steppe, H. **123**, 107

The spectral appearance of active galactic nuclei undergoing bursts of star formation

Krügel, E., Tutukov, A., Loose, H. **124**, 89

Superionization in the A0V star HD 119921

Molaro, P., Morossi, C., Ramella, M., Franco, M. **127**, L3

The compact radio core of Mkn 348: evidence for directed outflow in a type 2 Seyfert galaxy

Neff, S.G., de Bruyn, A.G. **128**, 318

Nutation

Luni Solar Nutation Tables and the Liquid Core of the Earth

Melchior, P. **87**, 365

O Stars, see Early Type Stars

An OH Survey of Orion Population Stars

Gahn, G.F., Lindroos, K.P., Sherwood, W.A., Winnberg, A. **83**, 263

Interaction of Hot Stars and the Interstellar Matter. X. Morphology, Excitation, and Structure of the Bright Galactic Nebula Sh2-156 (IC 1470)

Heydari-Malayeri, M., Testor, G., Lortet, M.C. **84**, 154

The CIII $\lambda\lambda$ 9701-9715 Lines in O Stars

Vreux, J.M., Dennefeld, M., Andriolat, Y. **85**, L7

Non-LTE Analysis of the O 3-star HD 93250

Kudritzki, R.-P. **85**, 174

Masses and Mass Loss from O and Of Stars

Lamers, H.J.G.L.M., Paerels, F.B.S., de Loore, C. **87**, 68

An Automatic Procedure for a Determination of the Effective Temperature and Gravity. Application to 100 O-type Stars

Morossi, C., Crivellari, L. **89**, 251; **41**, 299

Studies of the Carina Nebula. III. The Spectral Energy Distribution of the Very Hot and Massive Star HD 93250

Thé, P.S., Tjin A Djie, H.R.E., Kudritzki, R.P., Wesselius, P.R. **91**, 360

Rates of Mass Loss from O-stars

Chiosi, C. **93**, 163

NON-LTE Analysis of Subluminous O-stars. IV. Spectral Photometry and NLTE Analysis of 11 Subluminous Stars

Hunger, K., Gruschinske, J., Kudritzki, R.P., Simon, K.P. **95**, 244

The Mass and Mass Ratio Distribution of Massive O Type Single Stars and Binaries

Vanbeveren, D. **95**, 321

Galactic Metal Abundance Gradient in Young Stellar Population

Panagia, N., Tosi, M. **96**, 306

The Helium Content of the Blue Star Near the Center of SN 1006

Simon, K.P., Hunger, K., Kudritzki, R.P. **98**, 211

Study of Compact Planetary Nebulae. II. Temperatures, Luminosities and Problems of Evolution of the Central Stars

Martin, W. **98**, 328

The Upper Luminosity Boundary of O Stars

Chiosi, C., Greggio, L. **98**, 336

Far-UV Wind Line Profile Changes in the O-type Star HD 175754

Carrasco, L., Costero, R., Stalio, R. **100**, 183

Mass Loss from O Subdwarfs

Hamann, W.-R., Gruschinske, J., Kudritzki, R.P., Simon, K.P. **104**, 249

LB 3459 - An O-type Subdwarf Eclipsing Binary System. Non-LTE Analysis of the Primary

Kudritzki, R.P., Simon, K.P., Lynas-Gray, A.E., Kilkenny, D., Hill, P.W. **106**, 254

The Schweizer-Middleditch Star: Not a Stellar Remnant of SN1006

Savedoff, M.P., Van Horn, H.M. **107**, L3

The O Type Subdwarf ROB 162 in the Globular Cluster NGC 6397

Caloi, V., Castellani, V., Panagia, N. **107**, 145

Nitrogen Anomalies in O-type Stars: A New Spectroscopic Criterion

Bisacchi, G.F., López, J.A., Firmani, C. **107**, 252

Non-LTE Analysis of Subluminous O-Stars. II. The Hydrogen-deficient Subdwarf O-Star HD 127493

Simon, K.P. **107**, 313

A Catalogue of Model HII Regions

Stasinska, G. **110**, 180; **48**, 299

R 136: WN or O Spectral Characteristics?

Vreux, J.M., Dennefeld, M., Andriolat, Y. **113**, L10

The Kinematical Structure of the Bipolar Nebula S 106

Solf, J., Carsenty, U. **113**, 142

Models for Stellar Coronae: The Effects of Coronal Heating with Long Dissipation Scale Lengths

Hearn, A.G. **116**, 296

Non-LTE analysis of massive O-stars. II. The O4 star ζ Puppis

Kudritzki, R.P., Simon, K.P., Hamann, W.-R. **118**, 245

A discussion of the infrared and radio region of the calculated spectral energy distribution of O-type stars

Groot, M., Thé, P.S. **120**, 89

A galaxy with a 3.2×2.2 kpc² H II region surrounding its nucleus

Meaburn, J. **122**, 111

OB Associations, see Associations

Young stars and bubbles in the Large Magellanic Cloud

Braunsfurth, E., Feitzinger, J.V. **127**, 113

Observational Methods, see also Data Analysis, Speckle Interferometry

Accurate 21-cm H I Spectra of Four Small Galaxies

Allen, R.J., Shostak, G.S. **71**, 272; **35**, 163

Atmosphere Transparency and Infrared Astronomy at the Gornegrat

Bensammar, S. **72**, 186

- A Computerized Differential Photometer for the Geneva Seven Colour Photometric System
Burnet, M., Rufener, F. **74**, 54
- Complementing Aperture Synthesis Radio Data by Short Spacing Components from Single Dish Observations
Bajaja, E., Albada, G.D. van **75**, 251
- A Multiple Beam Technique for Overcoming Atmospheric Limitations to Single-dish Observations of Extended Sources
Emerson, D.T., Klein, U., Haslam, C.G.T. **76**, 92
- Astronomical Applications of Infra-red Television Imaging
Lamy, P.L., Nguyen-Trong, T., Adjabschirzadeh, A., Koutchmy, S. **77**, 257
- On the Use of a Focal-reducer System for Slitless Fieldspectroscopy
Geyer, E.H., Hoffmann, M., Nelles, B. **80**, 248
- Radio Continuum Mapping Technique at Low Elevations, as Illustrated by Application to the Southern Part of Loop IV
Reich, W., Steffen, P. **93**, 27
- A New Method for Determining the Rotation of Late Spectral Type Stars
Benz, W., Mayor, M. **93**, 235
- Minimum of Light Curves from a Spline-smoothing Technique
Picchio, G. **94**, 52
- Cepstral Analysis of Broad-band Radio Emission. New Possibilities in Radio Astronomy
Afraimovich, E.L. **97**, 366
- Observing Technique for Photoelectric Photometry: Analytical Expressions for the Optimum Choice of Integration
Claudius, M., Florentin-Nielsen, R. **100**, 186
- The processing of infrared sky noise by chopping, nodding and filtering
Papoular, R. **117**, 46
- Observation of faint stars by a slit micrometer
Hog, E. **122**, 57
- A matrix photodiode array to measure Doppler shifts of solar spectral lines
Küweler, G., Wöhl, H. **122**, 69
- ### Occultations
- The Close Approaches of the Minor Planet Eunomia to the Stars SAO 97745, 97645, and 97646
Haupt, H., Terzan, A., Bernard, A. **71**, 260
- A New Method of Deconvolution and its Application to Lunar Occultations
Subrahmanya, C.R. **89**, 132
- Restoration of Lunar Occultation Scans
von der Heide, K. **89**, 220
- Sensitive Mainline OH Spectra of Three H II Regions
Cohen, N.L., Willson, R.F. **96**, 230
- Results of the PHEMU79 Observation Campaign of Mutual Phenomena of the Galilean Satellites of Jupiter in 1979 (Text in French)
Arlot, J.-E., Bernard, A., Bouchet, P., Daguillon, J., Dourneau, G., Figer, A., Helmer, G., Lecacheux, J., Merlin, Ph., Meyer, C. **111**, 151
- Contribution to the reduction of photoelectric occultation observations using an integrated deconvolution method (Text in French)
Froeschlé, M., Meyer, C. **121**, 319
- An improved position of 14 Piscium
Bien, R., Schwan, H. **124**, L7
- ### OH Sources, see also Maser, Radio Frequency Lines: Molecular Lines
- A Systematic Search at 1612 MHz for OH Maser Sources. I. Surveys near the Galactic Centre
Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **71**, 273; **35**, 179
- New OH Sources in CRL Objects and Late Type Stars. On the Correlation of OH Velocity Pattern and Stellar Period
Le Squeren, A.M., Baudry, A., Brillet, J., Darchy, B. **72**, 39
- A Systematic Search at 1612 MHz for OH Maser Sources. II. A Large-scale Survey between $10^\circ \leq l \leq 150^\circ$ and $b \leq 4^\circ 2$
Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **73**, 368; **36**, 193
- Radiative Transport Effects in OH Maser Sources
Kegel, W.H. **77**, 373; **38**, 131
- Observations of Neutral Hydrogen and OH in the Dark Nebula Lynds 1778/1780
Mattila, K., Sandell, G. **78**, 264
- OH Observations of the Dark Nebula Lynds 134
Mattila, K., Winnberg, A., Grasshoff, M. **78**, 275
- OH Observations of V1057 Cygni
Andersson, C., Johansson, L.E.B., Winnberg, A., Goss, W.M. **80**, 260
- Is the 1612 MHz Flare of U Orionis Related to Its Light Curve?
Garrigue, J.P., Mennessier, M.O. **81**, L13
- On Heating by Ion Streams in H II/OH Regions
Elitzur, M. **81**, 354
- OH Pumping by IR Line Overlap. Application to Circumstellar Masers
Bujarrabal, V., Guibert, J., Nguyen-Q-Rieu, Omont, A. **84**, 311
- Interpretation of OH Main Line Anomalies in Interstellar Clouds
Bujarrabal, V., Nguyen-Q-Rieu **91**, 283
- Near Infrared Photometry and OH Observations of Mira Variables. Implications for Stellar Evolution
Mennessier, M.O. **93**, 325
- A Systematic Search at 1612 MHz for OH Maser Sources. III. The Galactic Distribution, Kinematics, and Emission Properties of Type II OH/IR Sources
Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **95**, 156
- A Systematic Search at 1612 MHz for OH Maser Sources. IV. Type II OH/IR Sources in the Central Region of the Galaxy
Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **95**, 171
- New Compact Infrared Objects Associated with Two Southern Type-I OH Masers
Epchtein, N., Guibert, J., Nguyen-Quang-Rieu, Turon, P., Wamsteker, W. **97**, 1
- Emission-absorption Observations of OH in Diffuse Interstellar Clouds
Dickey, J.M., Crovisier, J., Kazès, I. **98**, 271
- Highly Excited OH in W3 (OH)
Baudry, A., Walmsley, C.M., Winnberg, A., Wilson, T.L. **102**, 287
- Mass Models of the Galactic Bulge Derived from the Distribution of OH/IR Stars
Isaacman, R., Oort, M.J.A. **102**, 347
- New Infrared Counterparts of Southern Type II OH Maser Sources
Epchtein, N., Nguyen-Quang-Rieu **107**, 229
- OH Observations of NH₃ Sources
Little, L.T., Cesarsky, D.A. **112**, 49

Pumping of H II/OH Masers: IR Line Overlaps and Collisional Excitation by H₂

Flower, D.R., Guilloteau, S. **114**, 238

Infrared Observations of OH/IR Stars

Willems, F., de Jong, T. **115**, 213

Physical Conditions in H II/OH Maser Regions

Guilloteau, S. **116**, 101

The peculiar circumstellar envelope around IRC + 10420

Diamond, P.J., Norris, R.P., Booth, R.S. **124**, L4

The nature of OH/IR stars. I. Infrared Mira variables

Engels, D., Kreysa, E., Schultz, G.V., Sherwood, W.A. **124**, 123

Ammonia absorption toward W3 (OH): 0''3 resolution maps in the (2,2) line

Guilloteau, S., Stier, M.T., Downes, D. **126**, 10

Observations of the ON 1 and ON 2 H II regions at 610 MHz

Matthews, H.E., Spoelstra, T.A.T. **126**, 433

The maser strength of OH/IR stars, evolution of mass loss and the creation of a superwind

Baud, B., Habing, H.J. **127**, 73

OH/IR stars within one degree of the galactic centre

Habing, H.J., Olmon, F.M., Winnberg, A., Matthews, H.E., Baud, B. **128**, 230

The isotopic abundance of interstellar oxygen derived from 18-cm line observations

Bujarrabal, V., Cernicharo, J., Guélin, M. **128**, 355

Opacities

Radiation Opacity in a Dense Plasma

Aharony, U., Opher, R. **79**, 27

The Infrared Ca⁺ Lines in Sunspot Umbrae

Kollatschny, W., Stellmacher, G., Wiehr, E., Falipou, M.A. **86**, 245

Umbral Models with Enhanced Continuum Opacity

Stellmacher, G., Wiehr, E. **95**, 229

The Solar Neutrino Problem

Opher, R. **98**, 39

Radiation Transfer in Stellar Interiors

Opher, R. **109**, 191

Open Clusters, see Clusters, open

Membership in the open cluster NGC 6709

Hakkila, J., Sanders, W.L., Schröder, R. **119**, 326; **51**, 541

Photometric search for Ap-stars in open clusters. IV. NGC 2287, Cr 121, NGC 2422 and supplementary measurements in NGC 1662 and NGC 2516

Maitzen, H.M., Wood, H.J. **126**, 80

VBLW photometry of the open cluster NGC 2516

Verschoor, J.N., van Genderen, A.M. **126**, 223; **53**, 419

Optical Identifications

The Structure and Identification of 3 C 105

Willis, A.G., Schilizzi, R.T. **71**, 253

NGC 1809 and PKS 0502-696

West, R.M. **71**, 262

Westerbork Observations of 4 C Sources with Steep Radio Spectra

Tielens, A.G.G.M., Miley, G.K., Willis, A.G. **71**, 272; **35**, 153

Optical Identification and 5 GHz Flux Measurements of Radiosources Selected from the B 2 Catalogue-V

Grueff, G., Vigotti, M. **72**, 380; **35**, 371

Optical Identification of the Radio Sources in the 3rd Westerbork Survey

Katbert, P., de Bruyn, A.G., Willis, A.G. **73**, 368; **36**, 213

Westerbork Observations of Flat Spectrum Radio Galaxies in the 5 GHz "S4" Survey

Kapahi, V.K. **74**, L11

A 6 cm Source Survey with the Westerbork Synthesis Radio Telescope. II. Analysis

Willis, A.G., Miley, G.K. **76**, 65

On the Discrepancy between the Optical and Radio Position of SS 433

de Vegt, Chr., Gehlich, U.K. **79**, L16

Precise Optical Positions of Radio Sources in the Southern Hemisphere

Walter, H.G., West, R.M. **86**, 1

Optical Identifications and Redshifts of Faint Radiogalaxies from the B2 Catalogue

Grueff, G., Vigotti, M., Spinrad, H. **86**, 50

Spectral Properties of Ooty Occultation Radio Sources

Gopal-Krishna, Steppe, H., Witzel, A. **89**, 169

Structure and Position Measurements at 5 GHz of Radiogalaxies Selected from the B2 Catalog

Grueff, G., Kotanyi, C., Schiavo-Campo, P., Tanzella-Nitti, G., Vigotti, M. **99**, 403; **44**, 241

A Deep Optical Search of the 1979 April 6 Gamma-ray Burst Error Box

Chevalier, C., Ilovaisky, S.A., Motch, C., Barat, C., Hurley, K., Niel, M., Vedrenne, G., Laros, J.G., Doyle Evans, W., Fenimore, E.E., Klebesadel, R.W., Estulin, I.V., Zenchenko, V.M. **100**, L1

Extragalactic Radio Sources with very Steep Decimetre-wave Spectrum

Gopal-Krishna, Steppe, H. **101**, 315

The Optical Counterpart of A0538-66

Pakull, M., Parmar, A. **102**, L1

Erratum: A Deep Optical Search of the 1979 April 6 Gamma-ray Burst Error Box

Chevalier, C., Ilovaisky, S.A., Motch, C., Barat, C., Hurley, K., Niel, M., Vedrenne, G., Laros, J.G., Doyle Evans, W., Fenimore, E.E., Klebesadel, R.W., Estulin, I.V., Zenchenko, V.M. **103**, 428

Optical Identification of the Radio Source 0104-408

Walter, H.G., West, R.M. **111**, 357

Optical counterparts of radio sources from 5 GHz surveys: identification between RA = 4 h and RA = 14 h

Meisenheimer, K., Röser, H.-J. **118**, 208; **51**, 41

A catalogue of extragalactic radio source identifications

Véron-Cetty, M.P., Véron, P. **125**, 175; **53**, 219

Orbital Determination, see Celestial Mechanics

Halley's Comet: Energy and Perturbations

Buffoni, L., Manara, A., Scardia, M. **108**, 141

Determination of nongravitational parameters for some periodic comets

Forti, G. **126**, 307

Origin of Matter, see Nuclear Reactions,

Orion Nebula

Ammonia in Orion

Wilson, T.L., Downes, D., Bieging, J. **71**, 275

Orion Nebula: Fabry-Perot High Resolution O I (8446 Å) Mapping

Cosmovici, C.B., Olthof, H., Strafella, F., Barbieri, C., Canton, G., D'Anna, E. **72**, 241

- Detection of a New Kind of Condensations in the Center of the Orion Nebula, by Means of S 20 Photocathodes Associated with a Lallemand Electronic Camera
Laques, P., Vidal, J.L. **73**, 97
- The Structure of the Orion Nebula: The Ionized Gas
Pankonin, V., Walmsley, C.M., Harwit, M. **75**, 34
- Infrared Spatial and Spectral Studies of an Ionization Front Region in the Orion Nebula
Aitken, D.K., Roche, P.F., Spenser, P.M., Jones, B. **76**, 60
- Photométrie Photoélectrique de Nébuleuses Gazeuses Diffuses dans la Raie H α
Vidal, J.L. **84**, 268; **40**, 33
- Herbig-Haro Objects in the Orion Nebula
Cantó, J., Goudis, C., Johnson, P.G., Meaburn, J. **85**, 128
- The Helium Ionization Structure of the Orion Nebula
Pankonin, V., Walmsley, C.M., Thum, C. **89**, 173
- Cos B Observation of High Energy Gamma Ray Emission from the Orion Cloud Complex
Caraveo, P.A., Bennett, K., Bignami, G.F., Hermesen, W., Kanbach, G., Lebrun, F., Masnou, J.L., Mayer-Hasselwander, H.A., Paul, J.A., Sacco, B. **91**, L3
- The Area Around the Orion Nebula Observed in the CO ($J=1-0$) Transition
Gillespie, A.R., White, G.J. **91**, 257
- The Giant Outburst of the 8 km s⁻¹ Water Maser Feature in Orion
Abraham, Z., Cohen, N.L., Opher, R., Raffaelli, J.C., Zisk, S.H. **100**, L10
- SiO Isotopes in Orion A
Olofsson, H., Hjalmarsen, Å., Rydbeck, O.E.H. **100**, L30
- Near Infrared High Resolution Spectrophotometry of Forbidden [C I] in the Orion Nebula
Cosmovici, C.B., Straffella, F., Iijima, T. **101**, 397
- The Origin of the Infrared [C I] Emission: H II or H I Regions?
Cesarsky, D.A. **113**, L7
- Extended and Anisotropic High-velocity Gas Flows in the Orion-KL Region
Olofsson, H., Ellér, J., Hjalmarsen, Å., Rydbeck, G. **113**, L18
- Aperture synthesis observations of Orion B at 2.695 and 8.085 GHz
Wink, J.E., Altenhoff, W.J., Webster, W.J., Jr. **120**, 322
- Mid-infrared maps of the Orion molecular cloud core
Lee, T.J., Beattie, D.H., Geballe, T.R., Pickup, D.A. **127**, 417
- Far-infrared spectrophotometry of the Orion Molecular Cloud 1 ridge
Drapatz, S., Haser, L., Hofmann, R., Oda, N., Iyengar, K.V.K. **128**, 207
- A proper motion membership analysis of the Orion Nebula region
McNamara, B., Huels, S. **128**, 260; **54**, 221
- Clumping in molecular clouds. The region between OMC1 and 2
Batrla, W., Wilson, T.L., Bastien, P., Ruf, K. **128**, 279
- Oscillations**, see also Pulsations
- Hydromagnetic Wave Modes in Magnetic Flux Tubes
Wilson, P.R. **71**, 9
- On the Nonradial Oscillations of the 1968 Nonstandard Solar Model
Rouse, C.A. **71**, 95
- Solar *p*-Mode Oscillations as a Tracer of Radial Differential Rotation
Deubner, F.-L., Ulrich, R.K., Rhodes, E.J., Jr. **72**, 177
- On the Oscillations of Al Velorum
Simon, N.R. **74**, 30
- Double Mode Pulsation as a Resonance Phenomenon
Simon, N.R. **75**, 140
- Calculation of Pseudo Solar Narrow Band Oscillations Produced by Atmospheric Differential Extinction
Grec, G., Fossat, E. **77**, 351
- On the Connection between Stellar Response Functions and the Secular Modes
Hazlehurst, J., Refsdal, S., Ritter, H. **78**, 303
- Stochastic Stellar Evolution. II. Fluctuations Due to Convection
Bertelli, G., Chiosi, C., Perdang, P. **79**, 261
- More on Avoided Level Crossing of Non-radial Stellar Oscillations
Roth, M.L., Weigert, A. **80**, 48
- Two-zone Models for Multimode Cepheid Variables I. Resonances in Homogeneous and Inhomogeneous Models
Petersen, J.O. **80**, 53
- On the Multiplicity of the Eigenvalues of Nonradial Stellar Oscillations
Gabriel, M. **82**, 8
- The Interpretation of Solar Line Shift Observations
Keil, S.L. **82**, 144
- Mechanical Flux in the Solar Chromosphere. I. Velocity and Temperature Weighting Functions for Ca II Lines
Mein, N., Mein, P. **84**, 96
- Mechanical Flux in the Solar Chromosphere. II. Determination of the Mechanical Flux
Schmieder, B., Mein, N. **84**, 99
- Non-radial Oscillations of a 1 M Star with an Initial Discontinuity in Chemical Composition
Boury, A., Scuflaire, R., Noels, A., Gabriel, M. **85**, 20
- The Splitting of Non-radial Modes of Oscillation in Rotating Magnetic Stars
Moss, D. **85**, 135
- The General Dispersion Relation for the Vibration Modes of Magnetic Flux Tubes
Wilson, P.R. **87**, 121
- Detection of 160-MIN Solar Oscillations and Atmospheric Extinction
Severny, A.B., Kotov, V.A., Tsap, T.T. **88**, 317
- On the Calculation of the Frequency Splitting of Adiabatic Non-radial Stellar Oscillations by Slow Differential Rotation
Cuypers, J. **89**, 207
- Normal Modes of Rotating Fluids
Sobouti, Y. **89**, 314
- Upper Limits on the Power in Solar Oscillations at 1.2 mm, 9 mm, 3.7 cm, and 11.1 cm Wavelengths
Kundu, M.R., Schmahl, E.J. **90**, 192
- Supergiant Variability: Amplitudes and Pulsation Constants in Relation with Mass Loss and Convection
Maeder, A. **90**, 311
- Detection of 160 min Solar Intensity Variations: Sampling Effect
Koutchmy, S., Koutchmy, O., Kotov, V.A. **90**, 372
- Structure in the 5 Minute Oscillations of Integral Sunlight
Claverie, A., Isaak, G.R., McLeod, C.P., van der Raay, H.B., Roca Cortes, T. **91**, L9
- Power Spectrum of Differential Refraction and Comparison with Solar Diameter Fluctuation Measurements
Fossat, E., Grec, G., Harvey, J.W. **94**, 95
- Low Frequency Oscillations of a Slowly Rotating Star: Quasi-toroidal Modes
Provost, J., Berthomieu, G., Rocca, A. **94**, 126

- HD 37819, a New δ Scuti Star: Determination of the Oscillation Mode
Burki, G., Mayor, M. **97**, 4
- Excitation of Gravity Modes in White Dwarfs with Chemically Stratified Envelopes
Dziembowski, W., Koester, D. **97**, 16
- The Solar Structure and the Five-minute Oscillation
Scuflaire, R., Gabriel, M., Noels, A. **99**, 39
- Solar Oscillations and Limb Darkening Fluctuations
Yerle, R. **100**, L23
- Frequency Dependence of the P_2 and P_3 Periods in Four Pulsars
Wolszczan, A., Bartel, N., Sieber, W. **100**, 91
- Dynamics in the Filaments: I. Oscillations in a Quiescent Filament
Malherbe, J.M., Schmieder, B., Mein, P. **102**, 124
- The Chromosphere Above Sunspot Umbrae. III. Spatial and Temporal Variations of Chromospheric Lines
Kneer, F., Mattig, W., v. Uexküll, M. **102**, 147
- Frequency Analysis of Photometric Observations of the β Cephei Star ν Eridani
Cuyper, J., Goossens, M. **102**, 282; **45**, 487
- Vibrational Stability of First Generation Stars
Ibrahim, A., Boury, A., Noels, A. **103**, 390
- Erratum: Solar Oscillations and Limb Darkening Fluctuations
Yerle, R. **103**, 428
- Comparison of Observed Solar Whole-disk Oscillation Frequencies with the Predictions of a Sequence of Solar Models
Christensen-Dalsgaard, J., Gough, D.O. **104**, 173
- On the Radius Determination of the Variable F-type Supergiant BL Tel(F)
van Genderen, A.M. **105**, 250
- On the Modal Structure of the Solar Oscillations
Stein, R.F. **105**, 417
- On the Linear Adiabatic Oscillations of a Uniformly and Synchronously Rotating Component of a Binary
Martens, L., Smeyers, P. **106**, 317
- Forced Oscillations in Binary Systems. Toroidal Modes
Rocca, A. **111**, 252
- Non-linear Stellar Oscillations. Two-Mode Interactions
Perdang, J., Blacher, S. **112**, 35
- New Features of the Oscillation Spectrum of the Sun
Kneer, F., Newkirk, G., Jr., von Uexküll, M. **113**, 129
- The Effect of Non-adiabatic Layers on the Vibrational Behaviour of Stars
Buchler, J.R., Regev, O. **114**, 188
- Frequency Analyses of Light and Radial Velocity Observations of α Lup
Lampens, P., Goossens, M. **115**, 413
- The resonance hypothesis applied to RV Tauri stars
Takeuti, M., Petersen, J.O. **117**, 352
- The pulsation of carbon Miras
Bergeat, J., Sibai, A.M. **119**, 207
- Identification of gravity modes in the newly discovered ZZ Ceti variable GD66
Dolez, N., Vauclair, G., Chevreton, M. **121**, L23
- How dense is the g-spectrum?
Perdang, J. **122**, 39
- Non-adiabatic quasi-toroidal modes in a slowly rotating star: application to ZZ Ceti
Berthomieu, G., Provost, J. **122**, 199
- The effects of nonlinearities on radial and nonradial oscillations
Buchler, J.R., Regev, O. **123**, 331
- Stability of thermal relaxation oscillations
Barranco, M., Buchler, J.R., Perdang, J. **125**, 6
- Relaxation oscillations and double temperature structures in stellar coronae
Hearn, A.G., Kuin, N.P.M., Martens, P.C.H. **125**, 69
- The equations that govern rotational and tidal perturbations of stellar oscillations
Smeyers, P., Martens, L. **125**, 193
- The detection limits in ground based measurements of stellar microvariability
Deubner, F.-L., Isserstedt, J. **126**, 216
- Oscillator Strength**, see Transition Probabilities
- Conversion formulas between radiative lifetimes and other dynamical variables for spin-allowed electronic transitions in diatomic molecules
Larsson, M. **128**, 291
- P Cygni Stars, P Cygni Profiles**
- Ultraviolet P Cygni Profiles of the C IV Resonance Line for O-type Stars in the Open Cluster IC 1805
Burki, G., Llorente de Andrés, F. **79**, L13
- On the High Resolution Ultraviolet Spectrum of P Cygni
Cassatella, A., Reekmans, F., Benvenuti, J., Clavel, J., Heck, A., Lamers, J.G.L.M., Macchetto, F., Penston, M., Selvelli, P.L., Stickland, D. **79**, 223
- Phase-correlated P Cygni Profile Variations of the C III Multiplet in UW Canis Majoris
Drechsel, H., Rahe, J., Kondo, Y., McCluskey, Jr., G.E. **94**, 285
- Comparison of the Spectrophotometric Data of Two Fe II Emission Line Stars
Muratorio, G. **95**, 210; **43**, 111
- The Strongly Polarized P Cygni Star with Infrared Excess CPD-52° 9243
Swings, J.P. **98**, 112
- R 81: P Cygni of the LMC
Wolf, B., Stahl, O., de Groot, M.J.H., Sterken, C. **99**, 351
- The Ultraviolet Spectrum of UW Canis Majoris
Drechsel, H., Rahe, J., Kondo, Y., McCluskey Jr., G.E. **102**, 282; **45**, 473
- Erratum: R 81: P Cygni of the LMC
Wolf, B., Stahl, O., de Groot, M.J.H., Sterken, C. **103**, 427
- "P Cygni" Profiles in P Cygni
Goldberg, L. **104**, L7
- High Resolution Observations of the H α Profile from η Car
Melnick, J., Ruiz, M.T., Maza, J. **111**, 375
- P Cygni stars as an intermediate stage between red supergiants and Wolf-Rayet stars
Lamers, H.J.G.L.M., de Groot, M., Cassatella, A. **123**, L8
- Mg II profile variations of Zeta Aurigae
Ahmad, I.A., Chapman, R.D., Kondo, Y. **126**, L5
- Determination of mass-loss rates from early-type stars on the basis of "log(W_1)-log(W_1^0)" diagrams
Surdej, J. **127**, 304
- Pairs of Galaxies**, see Double Galaxies
- Parallaxes**, see also Trigonometric Parallaxes
- Should We Go to Space for Parallaxes
Connes, P. **71**, L1
- We Need Parallaxes from Space and from Ground. Supplementing Pierre Connès' Remarks
Høg, E. **75**, L4

- Let Space Help Those Who Help Themselves. A Reply to Eric Høg, and Some More Thoughts on Parallaxes
Comnes, P. **76**, L11
- On the Distance of Some Early-type Galaxies in the Field of NGC 7331
Michard, R. **78**, 122
- Relative Distance Moduli of Early-type Galaxies
Michard, R. **78**, 251; **38**, 245
- Velocity Dispersions in H II Regions as Distance Indicators
de Vaucouleurs, G. **79**, 274
- Relative Luminosities and Distances of Early-type Galaxies
Michard, R. **79**, 337
- On the Distance of the Giant Spiral Galaxy M 101
Capaccioli, M., Fasano, G. **83**, 354
- The Use of Luyten's Magnitude Estimates in the Selection of Red Nearby Star Suspects from His Proper Motion Catalogues LHS and NLTT
Gliese, W., Jahreiss, H. **85**, 350
- Distances of Planetary Nebulae
Maciel, W.J., Pottasch, S.R. **88**, 1
- Tests of Two Different Maximum Likelihood Algorithms for Determining Statistical Parallaxes
Jones, D.H.P., Heck, A., Dawe, J., Clube, S.V.M. **89**, 225
- On the Space Distribution of Semi-Regular Variables
Aslan, Z. **90**, 355
- The Absolute Magnitude of the Am Stars
Gómez, A.E., Grenier, S., Jaschek, M., Jaschek, C., Heck, A. **93**, 155
- The Motions of 4 Southern Double Stars
Wilson, R.H. Jr. **95**, 210; **43**, 99
- Photometric Parallaxes for Nearby Stars
Hauck, B., Davis Philip, A.G. **95**, 393; **43**, 191
- Statistics of Planetary Nebulae
Maciel, W.J. **98**, 406
- The Distance of Large Amplitude Red Variables
Celis, S., L. **99**, 58
- Distances of Planetary Nebulae II
Maciel, W.J. **99**, 205; **44**, 123
- The Absolute Magnitudes of the Ap Stars
Grenier, S., Jaschek, M., Gomez, A.E., Jaschek, C., Heck, A. **100**, 24
- Derivation of Positions and Parallaxes from Simulated Observations with a Scanning Astrometry Satellite
Høyer, P., Poder, K., Lindegren, L., Høg, E. **101**, 228
- Galactic Kinematic Distances from Velocity Gradients
Rohlf, K. **102**, 91
- The Distance to G316.8-0.1
Shaver, P.A., Retallack, D.S., Wamsteker, W., Danks, A.C. **102**, 225
- Statistical Method for Calculating Parallaxes and Masses of Binaries with Unknown Orbits
Couteau, P. **102**, 313
- The Colours, Magnitudes and Parallaxes of the Nearby Stars
Grenon, M., Rufener, F. **103**, 208; **46**, 25
- Geneva Photometric Boxes. III. Distances and Reddenings for 43 Open Clusters
Nicolet, B. **104**, 185
- The Sun Among the Stars. V. A Second Search for Solar Spectral Analogs. The Hyades' Distance
Hardorp, J. **105**, 120
- Anomalous Motions of H I Clouds
Shaver, P.A., Radhakrishnan, V., Anantharamaiah, K.R., Retallack, D.S., Wamsteker, W., Danks, A.C. **106**, 105
- The Absolute Magnitudes of G 5-M 3 Stars near the Giant Branch
Egret, D., Keenan, P.C., Heck, A. **106**, 115
- An H I Absorption Determination of the Distance of W 31
Kalberla, P.M.K., Goss, W.M., Wilson, T.L. **106**, 167
- The Distance to the Planetary Nebula NGC 7027
Pottasch, S.R., Goss, W.M., Arnal, E.M., Gathier, R. **106**, 229
- On the Distance to the Giant Galactic H II Region NGC 3603
Melnick, J., Grosbøl, P. **107**, 23
- Photometric Parallaxes of Nearby Main-Sequence Stars with Annual Proper Motion of 0".7 or More Derived from Eggen's B, V and R, I Data
Gliese, W. **107**, 413; **47**, 471
- Models of Stellar Evolution and Their Use in Calibrating Distances and Element Abundances of Stars
Gehren, T. **109**, 187
- Westerbork and VLA Observations of G 127.1+0.5
Pauls, T., van Gorkom, J.H., Goss, W.M., Shaver, P.A., Dickey, J.M., Kulkarni, S. **112**, 120
- The Cepheid Period-Luminosity-Colour Relation: A Most Unsuitable Distance Indicator
Stift, M.J. **112**, 149
- H I line studies of galaxies. II. The 21-cm line width as an extragalactic distance indicator
Bottinelli, L., Gouguenheim, L., Paturel, G., de Vaucouleurs, G. **118**, 4
- Considerations arising from the faint absolute magnitude of halo RR Lyrae variables and an error in the Cepheid PLC relation
Clube, S.V.M., Dawe, J.A. **122**, 255
- Photoelectric photometry of peculiar and related stars. II. $\Delta\alpha$ -photometry of 339 southern Ap-stars
Maitzen, H.M., Vogt, N. **123**, 48
- Erratum: Photoelectric photometry of peculiar and related stars. II. $\Delta\alpha$ -photometry of 339 southern Ap-stars
Maitzen, H.M., Vogt, N. **127**, 244
- Variable stars: how accurate will be their astrometric measurements by HIPPARCOS?
Mennessier, M.O., Guibert, J. **128**, 69
- Peculiar A stars**
- Observational Evidence for the Pulsational Stability of Some Ap Stars
Weiss, W.W. **71**, 271; **35**, 83
- Line Blanketed Model Atmospheres of Ap Stars II Numerical Results
Muthsam, H. **71**, 271; **35**, 107
- The Oblique Rotator Model. Discussion of Deutsch and Khokhlova Methods
Megessier, C., Khokhlova, V.L., Ryabchikova, T.A. **71**, 295
- The Photometric Variability of the Ap Star HD 92664
Vanbeveren, D., Hensberge, H. **72**, 378; **35**, 301
- Line Blanketed Model Atmospheres of Ap-stars I
Muthsam, H. **73**, 159
- Variability of the λ 5200-flux Depression of the Ap Star HD 111133
Buchholz, M., Maitzen, H.M. **73**, 222
- Spectral Variations of the Ap Star HD 216533. I. Observational Results (Erratum)
Floquet, M. **73**, 367; **36**, 167
- Magnetic Latitude of the Metals in Ap Stars
Floquet, M. **74**, 250
- The Oblique-rotator of HR 7129
Hensler, G. **74**, 284

- On the Orientation of Magnetic and Rotation Axes in Ap Stars.
II. Results
Hensberge, H., Rensbergen, W. van, Goossens, M., Deridder, G. **75**, 83
- Chemically Peculiar A Stars and Accretion of Grains
Havnes, O. **75**, 197
- Photoelectric Observations of Peculiar A and Related Stars I: Strömgren Photometry of 341 Ap Stars
Vogt, N., Faúndez, A.A. **75**, 262; **36**, 477
- Periodicity of the Silicon Star HD 116890
Stift, M.J. **76**, 252
- Radiation Forces and the Abundance of Boron in Normal and Peculiar Stars of Type A and B
Borsenberger, J., Michaud, G., Praderie, F. **76**, 287
- The Light Variations of the Ap Star CQ UMa
Pavlovski, K. **76**, 362
- Spectral Variations of the Ap Star HD 216533. II. The Oblique Rotator Model
Floquet, M. **77**, 263
- On the Decentred Dipole and Dipole-quadrupole Magnetic Field Models for Ap Stars
Deridder, G., van Rensbergen, W., Hensberge, H. **77**, 286
- Probable Periodicities of the Ap Stars ξ Phe and HD 30849
Renson, P. **77**, 366
- Angular Diameters, Radii, and Effective Temperatures of Ap Stars
Shallis, M.J., Blackwell, D.E. **79**, 48
- The Effective Magnetic Field of an Oblique Rotating Star with an Irrational and Axisymmetric Surface Distribution of Magnetic Field
Goossens, M. **79**, 210
- β Photometry of Przybylski's Star, A Comparison of Period Determination Methods
Weiss, W.W., Kreidl, T.J. **81**, 59
- The Absolute Magnitude of the Hg-Mn Stars
Jaschek, M., Jaschek, C., Grenier, S., Gómez, A.E., Heck, A. **81**, 142
- Photometric and Magnetic Variability of the Late Ap Star HD 3980
Maitzen, H.M., Weiss, W.W., Wood, H.J. **81**, 323
- Contribution to the Study of Composite Spectra Stars. I. New Organization for the Bright Stars Pattern of Hynek's Lists
Ginestet, N., Pedoussaut, A., Carquillat, J.M., Nadal, R. **81**, 333
- The Light Variations of the Ap Star HR 8861
Blanco, C., Catalano, F.A., Strazzulla, G. **81**, 389; **39**, 127
- Observations of the Mid-ultraviolet Spectrum of Peculiar A and B Stars and of Be Stars, Bn Stars, and Shell Stars
Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **82**, 48
- A Non-axisymmetric Eccentric Dipole Model for the Magnetic Variations of HD 215441
Stift, M.J. **82**, 142
- A Photometric Way to the Surface Magnetic Field of Ap Stars
North, P. **82**, 230
- New $\lambda\alpha$ -Photometry of Peculiar A-type Stars: Evidence for a Two-component-structure of the λ 5200-feature
Maitzen, H.M., Seggewiss, W. **83**, 328
- Broad Flux Depressions in Ap-stars: A Comparison between Synthetic Spectra and Spectrophotometry
Maitzen, H.M., Muthsam, H. **83**, 334
- A Study of δ_{1400} -Ap Stars
Maitzen, H.M. **84**, L9
- On the Absolute Oscillator Strength of Hg II 3984 Å and the Presence of Hg Ions in Ap Stars
Dworetsky, M.M. **84**, 350
- The Short Period Radial Velocity Variability of the Si Star CG And (HD 224801)
Rice, J.B. **84**, 359
- Cobalt in the Southern Magnetic Ap Star HR 5049
Dworetsky, M.M., Trueman, M.R.G., Stickland, D.J. **85**, 138
- Spectrophotometry of Peculiar B and A Stars. V. HD 32650, 84 Ursae Majoris, HD 149822, 19 Lyrae, 4 Cygni, HD 196178, and 108 Aquarii
Adelman, S.J. **86**, 149
- Line Blanketed Model Atmospheres of Ap Stars. III. α^2 Canum Venaticorum
Muthsam, H., Stepień, K. **86**, 240
- Catalogue of Photometric Data Related to Surface Magnetic Fields for B-type Stars
Cramer, N., Maeder, A. **87**, 254; **41**, 111
- The Identification of Rare Earths in the Silicon Star HD 187473
Hensberge, H., Cowley, C.R., van Rensbergen, W., Aikman, G.C.L. **87**, 369
- Relation between Surface Magnetic Field Intensities and Geneva Photometry
Cramer, N., Maeder, A. **88**, 135
- The Ultraviolet Absorption by the Photoionisation Spectrum of Fe I in Ap Stars
Jamar, C. **89**, 22
- $uvby_{182}$ -Photometry of Some Fainter Ap-stars
Maitzen, H.M. **89**, 230
- The Periods of 21 Com
Weiss, W.W., Breger, M., Rakosch, K.D. **90**, 18
- Periodic Spectral Variability of the Ap Star HR 234
Panek, R.J. **90**, 341
- Simulation of Variable Ultraviolet Line Blanketing in Ap Si Stars
Borsenberger, J., Jamar, C. **91**, 247
- On the Period Determination of Variable Stars
Renson, P. **92**, 30
- Line Blanketed Model Atmospheres of Ap Stars. IV. UBV Colors and Effective Temperatures of Ap Stars
Stepień, K., Muthsam, H. **92**, 171
- Spectrophotometry of Peculiar B and A Stars. VI. HD 32633, HD 34452, and HD 133029
Adelman, S.J., White, R.E. **92**, 323; **42**, 289
- Spectrophotometry of Peculiar B and A Stars. VII. HD 6164, HD 8855, HD 11187, HD 171782, HD 190068, HD 200311, and HD 220147
Adelman, S.J. **92**, 325; **42**, 375
- Some Consequences of Sr, Y, and Zr gf Values Calculation
Pirronello, V., Strazzulla, G. **93**, 411
- The Infrared-excess of Peculiar B and A Stars I
Groote, D., Kaufmann, J.P. **94**, L23
- A Photoelectric Search for Ap Stars in the Orion Association
Joncas, G., Borra, E.F. **94**, 134
- Spectrophotometry of Peculiar B and A Stars. VIII. O Aurigae, 137 Tauri, 15 Cancri, 3 Hydrae, NU Cancri, 17 Comae A, and 21 Comae
Adelman, S.J. **95**, 208; **43**, 25
- Photometric Evidence for the Appearance of the λ 5200 Flux Depression in Helium-weak Stars
Maitzen, H.M. **95**, 213
- On the Effective Magnetic Field of an Oblique Rotating Star with an Axisymmetric Magnetic Field
Goossens, M., Martens, L., Gadeyne, L. **95**, 240

- Absolute Transition Probabilities in the Spectra of Eu I and Eu II.
I. Lifetime Measurements
Meyer, G., Ruland, W., Sahm, A., zu Putlitz, G. **95**, 278
- Spectrophotometry of Peculiar B and A Stars. IX. HD 5797, HD 12288, 9 Tauri, HD 81009, HD 111133, 33 Librae, and HD 216533
Adelman, S.J. **95**, 393; **43**, 183
- UV Observations and Variability of Alpha Andromedae
Rakos, K.D., Jenkner, H., Wood, J. **95**, 394; **43**, 209
- A Photoelectric Investigation of Ap-Stars in Open Clusters. I. NGC 2516 and NGC 1662
Maitzen, H.M., Hensberge, H. **96**, 151
- Photometric Search for Ap Stars among Blue Stragglers in Open Clusters
Maitzen, H.M., Seggewiss, W., Tüg, H. **96**, 174
- Autoionization of Si II and the Spectrum of Magnetic Ap Stars
Artru, M.C., Jamar, C., Petrini, D., Praderie, F. **96**, 380
- Short Period Light Variations of the Ap-Star HD 224801
Nittmann, J., Rakosch, K.D. **97**, 325
- Bolometric Corrections of Silicon Stars
North, P. **97**, 359
- Variations photométriques d'étoiles Ap observables à La Silla en Novembre et Décembre
Renson, P., Manfroid, J. **99**, 202; **44**, 23
- A Catalogue and Bibliography of Mn-Hg Stars
Schneider, H. **99**, 205; **44**, 137
- Spectrophotometry of Peculiar B and A Stars. XI. HD 89069, HD 165474, 10 Aquilae, HD 191742, HD 192678, and HD 204411
Adelman, S.J. **99**, 404; **44**, 309
- A Photoelectric Investigation of Ap-stars in Open Clusters II. NGC 6475
Maitzen, H.M., Floquet, M. **100**, 3
- The Absolute Magnitudes of the Ap Stars
Grenier, S., Jaschek, M., Gomez, A.E., Jaschek, C., Heck, A. **100**, 24
- Line Blanketed Model Atmospheres of Ap-Stars. V. The Hg-Mn Stars 53 Tau and κ Cnc
Stepień, K., Muthsam, H. **100**, 159
- Element Stratification in the Atmospheres of Main Sequence Stars: The Silicon Accumulation
Alecian, G., Vaclair, S. **101**, 16
- Effective Temperature of Ap Stars
Floquet, M. **101**, 176
- On the Physical Nature of Delta Delphini Stars
Saez, M., Auvergne, M., Valtier, J.-C., Baglin, A., Morel, P. **101**, 259
- Comparison Between the Observed Intrinsic Colour $(b-y)_0$ and the Calculated Theoretical Index $(b-y)$ for A-type Stars
Burkhart, C., Van't Veer, C., Faraggiana, R. **103**, 145
- A Photoelectric Investigation of Light Variability in AP Stars
Hensberge, H., Maitzen, H.M., Deridder, G., Gerbaldi, M., Delmas, F., Renson, P., Doom, C., Weiss, W.W., Morguleff, N. **103**, 210; **46**, 151
- Diffusion Models for Magnetic Ap-Bp Stars
Michaud, G., Mégessier, C., Charland, Y. **103**, 244
- The Sr-Y-Zr Abundance Peak in HR 6127
Pirronello, V., Strazzulla, G. **104**, 80
- Absorption Line Symmetries for Two HgMn Stars
Rice, J.B., Wehlau, W.H. **106**, 7
- On the Detection of Abundance Stratifications in Peculiar Stars Through the Curve of Growth Method
Alecian, G. **107**, 61
- Absolute Transition Probabilities in the Spectra of Eu I and Eu II.
II. Line Intensity Measurements
Karner, C., Meyer, G., Träger, F., zu Putlitz, G. **107**, 161
- Contribution to the Study of Composite Spectra. II. A, Am, Ap Spectroscopic Binaries (Text in French)
Ginestet, N., Jaschek, M., Carquillat, J.M., Pédoussaut, A. **107**, 215
- Classification Properties of the Vilnius-Geneva Photometric System. II. Stars with Peculiar Chemical Composition
North, P., Hauck, B., Straižys, V. **108**, 373
- A Search for Ap Stars in the Scorpio-Centaurus Association: Additional Evidence for a Slow Metal Enrichment
Borra, E.F., Joncas, G., Wizinowich, P. **111**, 117
- Spectral Variations of Two Cool Ap Stars: HD 25354 and HD 152107
Floquet, M. **112**, 299
- Spectrophotometry of Peculiar B and A Stars. XII. HD 10783, 56 Tauri, HD 43819, 53 Aurigae, 49 Camelopardalis, HD 64486, HD 147550, HD 184905 and HD 192913
Adelman, S.J. **112**, 394; **49**, 663
- Photometric Properties of Ap Stars in the Geneva System
Hauck, B., North, P. **114**, 23
- A Photoelectric Investigation of Ap-stars in Open Clusters. III. NGC 2362, NGC 2546, and NGC 3228
Maitzen, H.M. **115**, 275
- VBLUV photometry of the magnetic Ap stars HD 137949 (33 Lib), HD 201601 (γ Equ), HD 203006 (θ Mic) and the peculiar shell star HD 190073
Deul, E.R., van Genderen, A.M. **118**, 289
- Spectrophotometry of peculiar B and A stars. XV. α Andromedae, AR Aurigae, 36 Aurigae, 36 Lyncis, ϕ Herculis, HR 6127, and HR 6997
Adelman, S.J., Pyper, D.M. **118**, 313
- Photometric observations of southern Ap stars with right ascensions close to 12 h (text in French)
Manfroid, J., Renson, P. **119**, 165; **51**, 267
- Spectrophotometry of peculiar B and A stars. XIII. HD 51418, 53 Camelopardalis, 78 Virginis, and Kappa Piscium
Pyper, D.M., Adelman, S.J. **119**, 324; **51**, 365
- Spectrophotometry of peculiar B and A stars. XIV. 56 Arietis, 41 Tauri, 25 Sextantis, HD 170973, HD 205087, and HD 215441
Adelman, S.J. **119**, 326; **51**, 511
- Photoelectric photometry of peculiar and related stars. II. Δa -photometry of 339 southern Ap-stars
Maitzen, H.M., Vogt, N. **123**, 48
- Spectroscopic orbit of the star HR 96
Hube, D.P. **124**, 151; **53**, 29
- A physical study of the Ursa Major cluster (with special attention to the peculiar A stars)
Lodén, L.O. **124**, 152; **53**, 33
- Infrared magnitudes (JHKLM) for 105 chemically peculiar A- and B-stars
Groote, D., Kaufmann, J.P. **124**, 154; **53**, 91
- Catalog of magnetic field measurements
Didelon, P. **124**, 154; **53**, 119
- Infrared colors of the chemically peculiar stars of the upper main sequence
Bonsack, W.K., Dyck, H.M. **125**, 29
- Photometric search for Ap-stars in open clusters. IV. NGC 2287, Cr 121, NGC 2422 and supplementary measurements in NGC 1662 and NGC 2516
Maitzen, H.M., Wood, H.J. **126**, 80

A list of candidates for high-velocity Ap stars

Jaschek, C., Jaschek, M., Gómez, A., Grenier, J.S. **127**, 1

Erratum: Photoelectric photometry of peculiar and related stars.

II. $\Delta\alpha$ -photometry of 339 southern Ap-stars

Maitzen, H.M., Vogt, N. **127**, 244

Peculiar Galaxies

Centimetre Wavelengths Radio Studies of Clumpy Irregular Galaxies

Heidmann, J., Klein, U., Wielebinski, R. **105**, 188

Peculiar Motion of the Sun, see Solar Motion**Penumbra**, see Sunspots**Photometry**, see also under the different Objects, especially Clusters, UV Radiation

RGU Photometry of a Field in the Direction to the Scutum Cloud

Karaali, S. **71**, 274; **35**, 241

Extension of Two *UBV* Magnitude Sequences in the Selected Areas 82 and 107 by Electronography

Purgathofer, A. **73**, 365; **36**, 79

A Computerized Differential Photometer for the Geneva Seven Colour Photometric System

Burnet, M., Rufener, F. **54**

Investigation of Characteristic Curves in the ESO-(B)-Survey

Isserstedt, J., Wolf, B. **75**, 261; **36**, 423

Morphology of Low-redshift Quasars and Related Objects. First Results Obtained by Electronography

Vanderriest, Ch., Schneider, J. **76**, 297

A New Computerized Method for Plate Calibration: An Application to Photometry of Galaxies

Agnelli, G., Nanni, D., Pittella, G., Trevese, D., Vignato, A. **77**, 45

Three-colour Photometry in the SA 133 Field near the Galactic Centre

Becker, W. **80**, 329; **38**, 341

Photoelectric Catalogue (Magnetic Tape)

Python, M. **80**, 331; **38**, 463

A Sample of Very Faint Ultraviolet Excess Objects in the $13^h + 36^m$ Field. I. The Data

Formigini, L., Zitelli, V., Bòboli, F., Braccisi, A. **82**, 393; **39**, 129

Estimation of Spectral Classifications for Bright Northern Stars with Interesting Strömgren Indices

Olsen, E.H. **82**, 394; **39**, 205

Prediction of Spectral Classification from Photometric Observations: application of the *wbyß* Photometry and the MK Spectral Classification. I. Prediction Assuming a Luminosity Class

Heck, A., Mersch, G. **83**, 287

Sixty Faint *UBVRI* Standards

Neckel, Th., Chini, R. **83**, 384; **39**, 411

Uniform Transformations and Extinction Variations for the *UBV* System

Haug, U. **84**, 23

Sky Background Estimation and Application

Bijaoui, A. **84**, 81

Focal Grating Photometer for the Determination of the Difference of Magnitude in Double Stars

Platzek, R.P., Ferrer, O.E. **84**, 106

wbyß Photoelectric Photometric Catalogue

Hauck, B., Mermilliod, M. **84**, 268; **40**, 1

A *UBVR* Photo-electric Sequence in Piscis Austrinus

Bunclark, P.S., Fraser, C.W., Dodd, R.J. **84**, 269; **40**, 81

The Utrecht Photometric System and the Adopted Standard Stars

Provoost, P. **84**, 270; **40**, 129

Stellar Chopping Photometry in Auroral Regions

Myrø, H.K. **84**, 297

A Photoelectric Sequence in the Region of the Sculptor Galaxy NGC 55

Alcaino, G. **84**, 354

Photometric Calibration of the International Ultraviolet Explorer (IUE): Low Dispersion

Bohlin, R.C., Holm, A.V., Savage, B.D., Snijders, M.A.J., Sparks, W.M. **85**, 1

Prediction of Spectral Classification from Photometric Observations - Application to the *wbyß* Photometry and the MK Spectral Classification. II. General Case

Mersch, G., Heck, A. **85**, 93

Ultraviolet Colours of Main-sequence Stars

Wesselius, P.R., van Duinen, R.J., Aalders, J.W.G., Kester, D. **85**, 221

An Analysis of the Hauck-Mermilliod Catalogue of Homogeneous Four-color Data, II.

Davis Philip, A.G., Egret, D. **85**, 266; **40**, 199

Comparison Between Geneva Photometric Boxes and MK Spectral Types Through Trigonometric Parallaxes

Crézé, M., Turon Lacarrieu, C., Goley, M., Mandwewala, N. **85**, 311

Relation between Surface Magnetic Field Intensities and Geneva Photometry

Cramer, N., Maeder, A. **88**, 135

Vilnius Photometric Catalogue (Magnetic Tape)

North, P. **89**, 252; **41**, 395

Intrinsic Colours of MK Types in the Geneva Photometric System

Meylan, G., Python, M., Hauck, B. **90**, 83

Correlations Between Line-profile and Photometric Variations in the B2 IV [e] Star HD 45677

Swings, J.P., Barbier, R., Klutz, M., Surdej, A., Surdej, J. **90**, 116

Multicolour *UBVRI* Photometry of Stars in M 17

Chini, R., Elsässer, H., Neckel, Th. **91**, 186

Catalogue général d'étoiles de type O, données spectroscopiques et photométriques, bande magnétique et listage

Goy, G. **91**, 263; **42**, 91

On the Linearity of Electronography

Jeffers, S. **92**, 196

Properties of Am Stars in the Geneva Photometric System

Hauck, B., Curchod, A. **92**, 289

A Plot of *UBV* Diagram

Nicolet, B. **92**, 323; **42**, 283

wbyß Photometry of Equatorial and Southern Bright Stars II

Heck, A., Manfroid, J. **92**, 324; **42**, 311

UBV Sequences in Three Northern Milky Way Regions and a Comment on the Interstellar Extinction Around $l=90^\circ$

Lindgren, H., Bern, K. **92**, 324; **42**, 335

RGU Three-colour Photometry of a Field in Norma (Norma III)

Kandemir, G. **95**, 394; **43**, 239

Geneva Photometric Boxes. I. A Topological Approach of Photometry and Tests

Nicolet, B. **97**, 85

Metal Abundance and Microturbulence in F0-G2 Stars and the Calibration of the Strömgren m_1 Index

Nissen, P.E. **97**, 145

A Photoelectric Sequence in the Region of the Sculptor Galaxy NGC 253

Alcaino, G. **97**, 201

- Standard Stars and Calibration for *JHKLM* Photometry
Wamsteker, W. **97**, 329
- A Theoretical Age and Mass Calibration of the Geneva Photometric System for Early-type Stars
North, P., Cramer, N. **97**, 416; **43**, 395
- On the Ultraviolet Extinction in the Galactic Plane
Kester, D. **99**, 375
- wbyß* Photometry of 210 B, A, and F Stars in Ten Areas Centered on Extragalactic Radio Sources at High Northern Galactic Latitudes
Knude, J. **99**, 402; **44**, 225
- Observing Technique for Photoelectric Photometry: Analytical Expressions for the Optimum Choice of Integration
Claudius, M., Florentin-Nielsen, R. **100**, 186
- Standard Stars for *H α* Photometry
Strauss, F.M., Ducati, J.R. **100**, 331; **44**, 337
- Infrared Observations of Southern Bright Stars
Engels, D., Sherwood, W.A., Wamsteker, W., Schultz, G.V. **101**, 417; **45**, 5
- Third Catalogue of Stars Measured in the Geneva Observatory Photometric System
Rufener, F. **102**, 280; **45**, 207
- On the Estimation of Photometric Spectral Types
Oblak, E., Chareton, M. **102**, 281; **45**, 459
- Up-To-Date *UBVRI* Values for the E-Region Standard Stars
Vogt, N., Geisse, H.S., Rojas, S. **103**, 207; **46**, 7
- A Photometric Catalogue of Stars in the Direction of the Bright Cloud B in Sagittarius
Terzan, A., Bernard, A. **103**, 208; **46**, 49
- UBV* Surface Brightness Photometry of eight Sections Through the Milky Way from the Helios Space Probes
Leinert, C., Richter, I. **103**, 210; **46**, 115
- Empirical Bolometric Corrections for the Main-Sequence
Habets, G.M.H.J., Heintze, J.R.W. **104**, 170; **46**, 193
- Relations Between Some Photometric Temperature Parameters
Meylan, G., Hauck, B. **104**, 171; **46**, 281
- X- and γ -ray Superfast Photometry
Bonazzola, S., Chevreton, M. **105**, 1
- QSO Counts: a Complete Survey of Stellar Objects to *B*=23
Koo, D.C., Kron, R.G. **105**, 107
- The Photometric History of the BL Lacertae Object OJ 287
Gaida, G., Röser, H.-J. **105**, 362
- How to Measure the Sun like a Star
Tüg, H. **105**, 395
- A Direct *UBV* Color Measurement of the Sun
Tüg, H., Schmidt-Kaler, T. **105**, 400
- Quadruple Extrema in the Complex Lightcurve of the Asteroid 37 Fides?
Schober, H.J. **105**, 419
- Geneva Photometric Boxes. II. The Reddening Towards the Galactic Poles
Nicolet, B. **106**, 378; **47**, 199
- Three-Colour Photometry of the Milky-Way Field HD 95540
Becker, W., Hassan, S.M. **106**, 379; **47**, 247
- Membership, Basic Parameters and Luminosity Function of the Southern Open Cluster NGC 2547
Clariá, J.J. **106**, 380; **47**, 323
- Picture Gallery: a Structured Presentation of OAO-2 Photometric Data Supported by OAO-2 Spectrophotometric Data and *UBV*, *ANS* and *TD1* Observations
Koornneef, J., Meade, M.R., Wesselius, P.R., Code, A.D., van Duinen, R.J. **106**, 381; **47**, 341
- RGU* Three Colour Photometry of a Field in Centaurus
Spaenhauer, A., Fang, Ch. **107**, 412; **47**, 441
- Catalogue of Measurements in the DDO Photoelectric Photometric System (Magnetic Tape)
Meylan, G. **107**, 414; **47**, 483
- Influence of Ellipticity on Photometric Profiles of Elliptical Galaxies
Nieto, J.L. **107**, 415; **47**, 535
- VBLUW* Photometry of Magellanic Cloud Super- and Hypergiants, Made in 1977 up to 1979
van Genderen, A.M., van Leeuwen, F., Brand, J. **107**, 416; **47**, 591
- UV* Photometric Data on Standard A, F and Am Stars Observed by S2/68
Van't Veer-Menneret, C., Faraggiana, R., Burkhart, C., Oberto, Y. **107**, 416; **47**, 595
- Photoelectric Photometry of Three Dark Asteroids
Debehogne, H., De Sanctis, G., Zappalà, V. **108**, 197
- Classification Properties of the Vilnius-Geneva Photometric System. II. Stars with Peculiar Chemical Composition
North, P., Hauck, B., Stražys, V. **108**, 373
- The Visual Double W UMa Binary BV and BW Draconis
Geyer, E.H., Hoffmann, M., Karimie, M.T. **108**, 416; **48**, 85
- Discovery of Fast Optical Activity in the X-ray Source GX 339-4
Motch, C., Ilovaisky, S.A., Chevalier, C. **109**, L1
- Historical Light Variations in Quasars Measured in Turku
Takalo, L.O. **109**, 4
- UV*, Optical and IR Observations of the Cepheid R Muscae
Eichendorf, W., Heck, A., Caccin, B., Russo, G., Sollazzo, C. **109**, 274
- Optical Structure of the Core of the Dynamically Advanced Globular Cluster NGC 6397
Aurière, M. **109**, 301
- Automatic Image Classification
Butchins, S.A. **109**, 360
- Photometry of 0957+561; Detection of Short Period Variations (in French)
Vanderriest, C., Bijaoui, A., Fèlenbok, P., Lelièvre, G., Schneider, J., Wlérick, G. **110**, L11
- Photoelectric Photometry of 4 U 2129+47
Calafat, R., Canal, R., Núñez, J., Torra, J. **110**, 23
- wby* photometry of Visual Double Stars: Absolute Magnitudes of Intrinsically Bright Stars
Olsen, E.H. **110**, 179; **48**, 165
- wby* Photometry in McCormick Proper Motion Fields
Degewij, J. **110**, 183; **48**, 481
- Geneva Photometric Boxes. O. Announcement of the Catalogue (Microfiches and Magnetic Tape)
Nicolet, B. **110**, 183; **48**, 485
- Absolute Photometry of Supernova Remnants and Emission Nebulae in the Galaxy and the Magellanic Clouds
Greve, A., van Genderen, A.M., Dennefeld, M., Danziger, I.J. **111**, 171
- Reddening Relations of the *VBLUW* and *UBV* Systems for Objects with Emission Line Spectra
Greve, A., van Genderen, A.M. **111**, 185
- Three-colour Photometry of a Field near the Galactic Centre (SA 133 F)
Becker, W., Fang, Ch. **111**, 209; **49**, 61
- Homogenous Catalogue of Red and Infrared Magnitudes in the Photoelectric Photometric System of Kron (Magnetic Tape)
Jasniewicz, G. **111**, 211; **49**, 99

Intermediate Band Filter Spectrophotometry of Bright Galaxies. I. Observations

- Solheim, J.E., de Vaucouleurs, G., de Vaucouleurs, A.* **111**, 212; **49**, 109
- Further *VBLUW* Photometry of the S Doradus Type Variables S Dor and HDE 269006 in the LMC and a Discussion on Their Temperatures
van Genderen, A.M. **112**, 61
- RGU-photometry of the Field Vela II
Becker, W., Marsoglu, A. **112**, 133
- The Cepheid Period-Luminosity-Colour Relation: A Most Unsuitable Distance Indicator
Stift, M.J. **112**, 149
- Photoelectric Observations of 44 Nysa During 1981 Opposition
Piironen, J.O. **112**, 172
- ANS Ultraviolet Photometry, Catalogue of Point Sources
Wesselius, P.R., Van Duinen, R.J., de Jonge, A.R.W., Aalders, J.W.G., Luinge, W., Wildeman, K.J. **112**, 178; **49**, 427
- Photographic RGU Photometry of Five Southern Open Clusters in Vela II
Topaktas, L., Fenkart, R.P. **112**, 178; **49**, 475
- A Photoelectric UVB Sequence in a Low Extinction Puppis Field
Reed, B.C., FitzGerald, M.P. **112**, 179; **49**, 521
- Four-colour Photometry of Eclipsing Binaries, XIVB: Lightcurves of QX Carinae
Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **112**, 180; **49**, 571
- New UVB Parameters for 46 E-SO Galaxies in the Virgo Cluster
Michard, R. **112**, 180; **49**, 591
- Surface Photometry of the Spiral Galaxy NGC 4501
Send, U. **112**, 235
- Geneva [*U, B, V*] Intrinsic Colours of B-type Stars
Cramer, N. **112**, 330
- Detailed Bibliography on the Surface Photometry of Galaxies
Davoust, E., Pence, W.D. **112**, 394; **49**, 631
- Photoelectric and Spectrographic Observations of ρ Vir (HR 4828)
Antonello, E., Mantegazza, L. **112**, 395; **49**, 709
- On the Short-term Variability of HD 153919 (=4U1700-37=V884 Sco)
van Paradijs, J., van der Woerd, H. **113**, 27
- Integrated Colors of Young Open Clusters as a Function of Age
Tarab, I. **113**, 57
- Multiaperture Photometry of Galaxies. II. Near-infrared Observations of Six Isolated Objects
Brosch, N., Isaacman, R. **113**, 231
- Photometric Properties of Ap Stars in the Geneva System
Hauck, B., North, P. **114**, 23
- Photographic Surface Photometry of the Milky Way. II. Surface Photometry in the Region of the Dark Cloud "Coalsack" in *U, B, V, R* (in German)
Seidensticker, K.J., Schmidt-Kaler, T., Schlosser, W. **114**, 60
- HR 2724 - A New Bright Variable in the δ Scuti Instability Strip
Baade, D., Stahl, O. **114**, 131
- The Bok and Tifft UVB Sequence in the Large Magellanic Cloud: Revised and Extended
Alcaino, G., Liller, W. **114**, 213
- UVB-polarimetry of the X-ray Binaries HD 77581 (4U 0900-40), HD 153919 (4U 1700-37) and of HD 152667
Östreicher, R., Schulte-Ladbeck, R. **114**, 328
- Photoelectric UVB-photometry in the Large Magellanic Cloud (Text in German)
Isserstedt, J. **114**, 419; **50**, 7

RGU-three Colour Photometry of a Field near NGC 6171 (Text in German)

- Wiedemann, D.* **114**, 421; **50**, 93
- Two Photoelectric *UBVRI* Sequences in the Bar of the Small Magellanic Cloud
Vigneau, J., Azzopardi, M. **114**, 422; **50**, 119
- Photometry in the Central Region of the Globular Cluster NGC 7099
Alcaino, G., Wamsteker, W. **114**, 422; **50**, 141
- Absolute Photometry of the Crab Nebula
Greve, A., van Genderen, A.M. **115**, 79
- Photographic Surface Photometry of the Milky Way. IV. The Northern Milky Way in the Ultraviolet Spectral Region (Text in German)
Winkler, C., Schmidt-Kaler, T., Schlosser, W. **115**, 115
- Absolute Ultraviolet Fluxes of Elliptical Galaxies as Observed with the Astronomical Netherlands Satellite (ANS)
de Boer, K.S. **115**, 218; **50**, 247
- Electronographic Photometry in the Galactic Cluster M 37
Robin, A. **115**, 218; **50**, 251
- UBV-H β Photometry of Luminous Stars Between $l=335^\circ$ and $l=6^\circ$
Dachs, J., Kaiser, D., Nikolov, A., Sherwood, W.A. **115**, 218; **50**, 261
- Physical Studies of Asteroids. VIII. Photoelectric Photometry of the Asteroids 42, 48, 93, 105, 145, and 245
Debehogne, H., Lagerkvist, C.-I., Zappalà, V. **115**, 218; **50**, 277
- Photographic Photometry of Galaxies Using the INMP. I. The Lenticulars NGC 404 and NGC 524
Barbon, R., Capaccioli, M., Rampazzo, R. **115**, 388
- Frequency Analyses of Light and Radial Velocity Observations of α Lup
Lampens, P., Goossens, M. **115**, 413
- Remarkable light changes of the active RS CVn system V 711 Tau (=HR 1099) during 1979-1981
Bartolini, C., Blanco, C., Catalano, S., Cerruti-Sola, M., Eaton, J.A., Guarneri, A., Hall, D.S., Henry, G.W., Hopkins, J.L., Landis, H.J., Louth, H., Marilli, E., Piccioni, A., Renner, T.R., Rodonò, M., Scaltriti, F. **117**, 149
- Intermediate band filter spectrophotometry of bright galaxies. II. Data reductions
Solheim, J.-E., de Vaucouleurs, G. **117**, 171; **50**, 283
- V 1016 Cygni and HM Sagittae: binary stellar systems
Taranova, O.G., Yudin, B.F. **117**, 209
- Ultraviolet and visible photometric parameters for the Am stars
Nicolet, B., Cramer, N. **117**, 248
- Constraints on the system parameters of the dwarf nova AH Herculis
Wargau, W., Rahe, J., Vogt, N. **117**, 283
- Empirical calibration of the RGU-system.
- I. Photoelectric realization of the system and definition of standard stars
Trefzger, C.F., Cameron, L.M., Spaenhauer, A., Steinlin, U.W. **117**, 347
- Calibrated B, V surface photometry of X-ray cD galaxies
Valentijn, E.A. **118**, 123
- Photographic surface photometry of the Milky Way. I. Data and reduction methods (text in German)
Schmidt-Kaler, T., Seidensticker, K.J., Pröll, H.J., Schlosser, W., Beck, R. **118**, 206; **51**, 1

- Photographic surface photometry of the Milky Way. III. Photometry of the central area of the Galaxy in the ultraviolet (text in German)
Pröll, H.J., Schmidt-Kaler, T., Schlosser, W. **118**, 207; **51**, 16
- Photoelectric photometry of the eclipsing binary NN Cephei
Güdür, N., Gülmen, Ö., Sezer, C., Sengonca, H. **118**, 208; **51**, 27
- DQ Cephei, a Delta Scuti Star of constant variability
Peña, J.H., Peniche, R., Margrave, T.E., Hobart, M.A., González, S.F. **118**, 209; **51**, 71
- Positions, magnitudes and colors for stars in the globular cluster M15
Buonanno, R., Buscema, G., Corsi, C.E., Iannicola, G., Fusi Pecci, F. **118**, 209; **51**, 83
- A multicolour photometric analysis of the eclipsing binary VV Ori
Giuricin, G., Mardirossian, F., Mezzetti, M., Chambliss, C.R. **118**, 209; **51**, 111
- The color-magnitude diagram for stars in the central part of the globular cluster NGC 7089 (M 2)
Aurière, M., Cordoni, J.-P. **118**, 210; **51**, 135
- A study of visual double stars with early type primaries. II. Photometric results
Lindroos, K.P. **118**, 210; **51**, 161
- VBLUW photometry of the magnetic Ap stars HD 137949 (33 Lib), HD 201601 (γ Equ), HD 203006 (θ Mic) and the peculiar shell star HD 190073
Deul, E.R., van Genderen, A.M. **118**, 289
- EX Hydrae: a coordinated campaign of photoelectric photometry from four observatories
Sterken, C., Vogt, N., Freeth, R., Kennedy, H.D., Marino, B.F., Page, A.A., Walker, W.S.G. **118**, 325
- Search for light variability of LSI + 61°303
Bartolini, C., Custodi, P., Dell'Atti, F., Guarnieri, A., Piccioni, A. **118**, 365
- RGU photometry of a southern starfield near the galactic centre (SA 158)
Fenkart, R.P., Topaktas, L., Becker, W. **119**, 163; **51**, 213
- Lists of photometric Am candidates
Nicolet, B. **119**, 164; **51**, 245
- Photometric observations of southern Ap stars with right ascensions close to 12 h (text in French)
Manfroid, J., Renson, P. **119**, 165; **51**, 267
- Detection and BVR photometry of late type stars in the Large Magellanic Cloud
Rebeiro, E., Martin, N., Mianes, P., Prévot, L., Robin, A., Rousseau, J., Peyrin, Y. **119**, 165; **51**, 277
- Simultaneous X-ray/optical observations of GX 339-4 during the May 1981 optically bright state
Motch, C., Ricketts, M.J., Page, C.G., Ilovaisky, S.A., Chevalier, C. **119**, 171
- A discussion on the reddening of long period Cepheids in the Magellanic Clouds
van Genderen, A.M. **119**, 192
- VBLUW photometry of the high-latitude, eclipsing system BL Tel
van Genderen, A.M. **119**, 265
- HD 129929: a multiperiodic pulsating early-type star at intermediate galactic latitude
Waelkens, C., Rufener, F. **119**, 279
- Near-infrared photometry. I. Homogenization of near-infrared data from southern bright stars
Koornneef, J. **119**, 326; **51**, 489
- Photoelectric UVB-photometry of Wolf-Rayet stars in the Large Magellanic Cloud
Feitzinger, J.V., Isserstedt, J. **119**, 326; **51**, 505
- RGU photometry in a field of the Galactic Bulge
Spaenhauer, A.M., Topaktas, L., Fenkart, R.P. **119**, 326; **51**, 533
- Infrared photometry of southern Wolf-Rayet stars
Pitault, A., Epchtein, N., Gómez, A.E., Lortet, M.C. **120**, 53
- Infrared photometry of the RS CVn binaries. I. TY Pyxidis
Antonopoulou, E. **120**, 85
- The flare activity of V 780 Tau
Pettersen, B.R. **120**, 192
- A generalized algorithm for efficient photometric reductions
Manfroid, J., Heck, A. **120**, 302
- The Gum Nebula: new photometric and spectrophotometric results
Chanot, A., Sivan, J.P. **121**, 19
- Properties of Am, δ Del, and δ Sct stars in the VBLUW system
Wiertz, M.J.J., van Genderen, A.M. **121**, 35
- An observational study of the influence of close companions on the pulsations of β Cephei stars
Waelkens, C., Rufener, F. **121**, 45
- HR 6522: a previously unknown multiperiodic delta Scuti star
Waelkens, C., Bartholdi, P. **121**, 162; **52**, 1
- On the variability of the two brightest stars in the galactic cluster IC 2391
Waelkens, C., Rufener, F. **121**, 162; **52**, 21
- An investigation of the heavily reddened young open cluster Tr 27 on the Walraven photometric system
Bakker, R., Thè, P.S. **121**, 162; **52**, 27
- The globular cluster NGC 6544
Alcaino, G. **121**, 163; **52**, 105
- UBV photometry of FK 4 and FK 4 Supplement stars
Oja, T. **121**, 164; **52**, 131
- Multi-periodicity of the new variable B-type star HR 3562
Burki, G. **121**, 211
- UBV photometry of the minor planets 86 Semele, 521 Brixia, 53 Kalypso and 113 Amalthea
Surdej, J., Surdej, A., Louis, B. **121**, 329; **52**, 203
- TV Cassiopeiae in the Utrecht photometric system
de Landtsheer, A.C. **121**, 329; **52**, 213
- Photometry of the post T Tauri star HD 36705
Rucinski, S.M. **121**, 330; **52**, 281
- The variability of the optical counterparts of four extragalactic radio sources
Miller, H.R. **121**, 331; **52**, 289
- Lightcurve synthesis of the semi-detached binaries LT Her, WX Eri, AW Cam
Russo, G., Milano, L. **121**, 331; **52**, 311
- Four-colour photometry of eclipsing binaries. XV B: light curves of V Puppis
Clausen, J.V., Nordström, B., Reipurth, B. **121**, 332; **52**, 323
- Optical photometry of massive X-ray binaries: 4U 1538-52/QV Nor
Pakull, M., van Amerongen, S., Bakker, R., van Paradijs, J. **122**, 79
- The β Cephei eclipsing binary system 16 Lacertae
Garrido, R., Sareyan, J.-P., Gimenez, A., Valtier, J.-C., Delgado, A.J., le Contel, J.-M., Ducatel, D. **122**, 193
- Intrinsic UV colour indices of early-type stars
Gatecki, Z., Graczyk, M., Janaszak, E., Kotos, R., Kretowski, J., Strobel, A. **122**, 207
- The missing UV opacity and the colours of solar-type stars
Magain, P. **122**, 225
- The light curves of a freely precessing spheroidal minor planet
Barsuhn, J. **122**, 237

- Photometric boxes in the four-color system
Philip, A.G.D., Egret, D. **123**, 39
- Photoelectric photometry of peculiar and related stars. II. *Aa*-photometry of 339 southern Ap-stars
Maitzen, H.M., Vogt, N. **123**, 48
- Remarkable modification of light curves for shadowing effects on irregular surfaces: the case of the asteroid 37 Fides
Zappalà, V., Di Martino, M., Scaltriti, F., Burchi, R., Milano, L., Young, J.W., Wahlgren, G., Pavlovski, K. **123**, 326
- Infrared photometry of the RS CVn binaries. II. *JHK* light curves of HR 1099
Antonopoulou, E. **123**, 358; **52**, 381
- Positions, magnitudes and colours for stars in the core of M 3
Aurière, M., Cordoni, J.-P. **123**, 358; **52**, 383
- VB* photometry of Cepheids in the Magellanic Clouds made in 1971-1978
van Genderen, A.M. **123**, 359; **52**, 423
- Photometric observations of AC Boo
Schieven, G., Morton, J.C., McLean, B.J., Hughes, V.A. **123**, 360; **52**, 463
- A photometric classification of pulsating variables with periods between one and three days
Diethelm, R. **124**, 108
- The nature of OH/IR stars. I. Infrared Mira variables
Engels, D., Kreysa, E., Schultz, G.V., Sherwood, W.A. **124**, 123
- Positions, magnitudes, and colors for stars in the globular cluster M 92
Buonanno, R., Buscema, G., Corsi, C.E., Iannicola, G., Smiglio, F., Fusi Pecci, F. **124**, 151; **53**, 1
- Photoelectric UVB photometry of southern and equatorial dwarf novae
Vogt, N. **124**, 151; **53**, 21
- NGC 6256, a galactic globular cluster
Alcaino, G. **124**, 152; **53**, 47
- The large C-type asteroids 146 Lucina and 410 Chloris and the small S-type asteroids 152 Atala and 631 Philippina: rotation periods and lightcurves
Schober, H.J. **124**, 153; **53**, 71
- Lightcurves and rotation periods for the asteroids 70 Panopaea and 235 Carolina
Schroll, A., Schober, H.J. **124**, 153; **53**, 77
- Period determination of the Delta Scuti star HR 5005
Peña, J.H., Peniche, R., González, S.F. **124**, 153; **53**, 81
- Infrared magnitudes (*JHKLM*) for 105 chemically peculiar A- and B-stars
Groote, D., Kaufmann, J.P. **124**, 154; **53**, 91
- Physical studies of asteroids. XI. Photoelectric observations of the asteroids 2, 161, 216, and 276
Carlsson, M., Lagerkvist, C.-I. **124**, 155; **53**, 157
- YZ Cassiopeiae and the Utrecht photometric system
de Landtsheer, A.C. **124**, 155; **53**, 161
- Notes on the heavily reddened and variable A-type supergiant CD-33° 12119
van Genderen, A.M., Hammerschlag-Hensberge, G., Thé, P.S. **124**, 197
- Optical photometry of massive X-ray binaries: Cen X-3/V779 Cen
van Paradijs, J., Lub, J., Pel, J.W., Pakull, M., van Amerongen, S. **124**, 294
- RGU photometry and Population II stars
Thévenin, F., Spaenhauer, A., Foy, R. **124**, 331
- High-resolution optical observations of NGC 3379. I. An analysis of previous data
Nieto, J.-L. **125**, 176; **53**, 247
- Photometric observations. Is HZ Herculis getting darker?
Thomas, H.-C., Africano, J., Delgado, A.J., Schmidt, H.U. **126**, 45
- Photometric search for Ap-stars in open clusters. IV. NGC 2287, Cr 121, NGC 2422 and supplementary measurements in NGC 1662 and NGC 2516
Maitzen, H.M., Wood, H.J. **126**, 80
- Photometric observations and elements of the eclipsing binary TT Herculis
Kwee, K.K., van Genderen, A.M. **126**, 94
- The detection limits in ground based measurements of stellar microvariability
Deubner, F.-L., Isserstedt, J. **126**, 216
- Infrared photometry of the RS CVn binaries. III. *JHK* light curves of UV Psc
Antonopoulou, E. **126**, 221; **53**, 347
- A photometric study of the eclipsing binary V478 Cygni
Sezer, C., Güdür, N., Gülmen, Ö., Sengonca, H. **126**, 221; **53**, 363
- High-resolution optical observations of NGC 3379. II. On the derivation of the East-West profile
Nieto, J.-L. **126**, 221; **53**, 383
- The Rosette Nebula. I. An absolutely calibrated photoelectric Hz surface photometry
Celnik, W.E. **126**, 222; **53**, 403
- VB* photometry of the open cluster NGC 2516
Verschoor, J.N., van Genderen, A.M. **126**, 223; **53**, 419
- Narrow-band photometry of G and K stars near the North Galactic Pole
Hansen, L., Radford, G.A. **126**, 223; **53**, 427
- Automated photographic photometry of stars in globular clusters
Buonanno, R., Buscema, G., Corsi, C.E., Ferraro, I., Iannicola, G. **126**, 278
- A modified method to calibrate photographic surface photometry of galaxies and nebulae
Feitzinger, J.V., Nicolov, A., Schmidt-Kaler, T., Tennigkeit, J. **126**, 352
- Phase dispersion minimization period analysis of the β Cephei star β Crucis
Cuyppers, J. **127**, 186
- The λ Boo stars: a reappraisal
Hauck, B., Slettebak, A. **127**, 231
- Erratum: Photoelectric photometry of peculiar and related stars. II. *Aa*-photometry of 339 southern Ap-stars
Maitzen, H.M., Vogt, N. **127**, 244
- The large C-type asteroid 423 Diotima: rotation period, lightcurve and implications for a possible satellite
Schober, H.J. **127**, 301
- Four-colour *uvby* and H β photometry of A5 to G0 stars brighter than 8.3
Olsen, E.H. **127**, 424; **54**, 55
- Four-colour photometry of eclipsing binaries. XVII. Light curves of DM Virginis
Andersen, J., Clausen, J.V., Nordström, B. **127**, 425; **54**, 161
- The eclipsing dwarf nova OY Carinae. II. Spectroscopy and photometry during quiescence
Schoembs, R., Hartmann, K. **128**, 37
- Photometric observations and analysis of the eclipsing binary DM Persei
Sezer, C. **128**, 260; **54**, 193

A search for periodic variability of normal A-type stars

Engberg, M. **128**, 260; **54**, 203

Photoelectric lightcurves and rotation period of the minor planet 201 Penelope

Surdej, J., Louis, B., Cramer, N., Rufener, F., Waelkens, C., Barbier, R., Birch, P.V. **128**, 262; **54**, 371

CQ Cephei. Is the period really changing?

Walker, E.N., Lloyd, C., Pike, C.D., Stickland, D.J., Zuiderwijk, E.J. **128**, 394

Photosphere, see Solar Photosphere

Physical Processes, see also Dynamo Theory, Gas Dynamics, Hanle Effect, Hydrodynamics, Line Broadening, Magnetohydrodynamics, Nuclear Reactions, Plasma Physics, Radiative Transfer, Shock Waves

Double-Charge Transfer Processes in Gaseous Nebulae

Tarter, C.B., Weisheit, J.C., Dalgarno, A. **71**, 366

Coherent Radiation from the Crab Nebula Wisps: A Reanalysis

Salvati, M. **72**, 261

Thermodynamics of Pair Production in a Nondegenerate Fermi Gas

Wandel, A., Yahil, A. **72**, 367

Polynomial Dispersion Relations

Giarretta, D.L. **75**, 273

Electron Captures in Nuclear Statistical Equilibrium

Yokoi, K., Neo, S., Nomoto, K. **77**, 210

The N III and O IV Intersystem Multiplets as Density Indicators for Solar Plasmas

Feldman, U., Doschek, G.A. **79**, 357

Ionization Equilibrium, Thermal Equilibrium, and Radiative Acceleration near Strong Radiation Sources with Different Spectral Shapes

Röser, H. **80**, 179

Charge Transfer Reactions in Some Astrophysical Situations

Péquignot, D. **81**, 356

Coherent Curvature Radiation

Kirk, J.G. **82**, 262

Rotational Excitation of OH by H₂ at Interstellar Temperatures

Flower, D.R. **83**, 33

Charge Transfer Reactions. II. A Photoionization Model of the Planetary Nebula NGC 7662

Péquignot, D. **83**, 52

Resonance-line Polarization. V. Quantum-mechanical Interference between States of Different Total Angular Momentum

Stenflo, J.O. **84**, 68

Comptonization of X-rays in Plasma Clouds. Typical Radiation Spectra

Sunyaev, R.A., Titarchuk, L.G. **86**, 121

Compressibility of Cold Catalyzed Matter

Haensel, P. **90**, 70

The Photoionisation of the Hydrogen Atom in Strong Magnetic Fields

Schmitt, W., Herold, H., Ruder, H., Wunner, G. **94**, 194

Quantum Theory of Cyclotron Emission and the X-ray Line in Her X-1

Melrose, D.B., Zheleznyakov, V.V. **95**, 86

Erosion Yields of 4K N₂ Frozen Gas by MeV Helium Ions

Pirronello, V., Strazzulla, G., Foti, G., Rimini, E. **96**, 267

Evidence for Autoionization and Dielectronic Recombination of Si II in the Atmospheres of B-type Stars

Underhill, A.B. **97**, L9

On the Stimulated Emission Terms in Partial Redistribution Calculations

Baschek, B., Mihalas, D., Oxenius, J. **97**, 43

Stellar Ion-induced Coulomb Enhancements of Nuclear Radiative Decay Rates

Ward, R.A. **97**, 157

Charge Exchange and Fine Structure Excitation in 0-D⁺ Collisions

Roueff, E. **99**, 394

Collisional *l*-mixing of Rydberg States of Carbon Due to Thermal Energy Charged Particles

Dickinson, A.S. **100**, 302

Calculated X-Radiation from Optically Thin Plasmas IV. Atomic Data and Rate Coefficients for Spectra in the Range 1-270 Å

Mewe, R., Gronenschild, E.H.B.M. **101**, 417; **45**, 11

f-Values for Isoelectronic Ions of Carbon

Ganas, P.S. **103**, 209; **46**, 101

Classical Rigid-ellipsoid model for Collisions of H₂ with HC₃N and HC₉N

Bhattacharyya, S.S., Dickinson, A.S. **107**, 26

Vlasov Equation?

Hénon, M. **114**, 211

Hadron resonance cooling of relativistic e⁺ - e⁻ plasmas

Schlickeiser, R. **127**, 201

Planetary Atmospheres, see under the single Planets

Reduction of the Standard Problem in Radiative Transfer for a Medium of Finite Optical Thickness

Hovenier, J.W. **82**, 61

Precision Flux Density Measurements of the Giant Planets at 8420 MHz

Turegano, J.A., Klein, M.J. **94**, 91

Calculation of the Solar Gravitational Torque on the Venus Thermal Tide

Teitelbaum, H., Cot, C. **97**, 265

On the Phase Matrix Basic to the Scattering of Polarized Light

Siewert, C.E. **109**, 195

A First Order Approximation Model of CO₂ Infrared Bands in the Venusian Lower Thermosphere

Battaner, E., Rodrigo, R., López-Puertas, M. **112**, 229

Surface Marking Variations of Selected Areas on Mars

de Mottoni y Palacios, G., Dollfus, A. **116**, 323

Quasi-axisymmetric circulation and superrotation in planetary atmospheres

Mayr, H.G., Harris, I. **121**, 124

Efficient methods to calculate Chandrasekhar's *H*-functions

Bosma, P.B., de Rooij, W.A. **126**, 283

Planetary Nebulae, see also Supernovae and Supernova Remnants

A Spectrophotometric Study of the Nebula around FG SGE

Kupo, I., Leibowitz, M. **71**, 102

Photoionization Models for Gaseous Nebulae

Köppen, J. **71**, 271; **35**, 111

Formation of the Hydrogen Lyman α Line in Expanding Spherical Planetary Nebulae

Wehrse, R., Peraiah, A. **71**, 289

The EUV Spectra of Young Planetary Nebulae

Flower, D.R., Nussbaumer, H., Schild, H. **72**, L1

The Structure of IC 418

Reay, N.K., Worswick, S.P. **72**, 31

2.7 GHz Radio Frequency Measurements of Planetary Nebulae

Milne, D.K., Webster, B.L. **73**, 368; **36**, 169

- Radio Observations at 5 GHz of Southern Planetary Nebulae. II
Milne, D.K. **73**, 369; **36**, 227
- The Butterfly Nebula M2-9: Its Possible Relation to B [e] Stars and/or to Protoplanetary Nebulae
Swings, J.P., Andrillat, Y. **74**, 85
- The Detection of Planetary Nebulae near the Galactic Centre at Radio Wavelengths. I
Wouterloot, J.G.A., Dekker, E. **75**, 259; **36**, 323
- A Comparison of Optical and Radio Structures of Planetary Nebulae
Felli, M., Perinotto, M. **76**, 69
- The Effective Temperatures of the O-Stars
Pottasch, S.R., Wesselius, P.R., Van Duinen, R.J. **77**, 189
- The Interaction of High-velocity Planetary Nebulae with the Interstellar Medium
Isaacman, R. **77**, 327
- Effect of Dust on the [OII] Emission from the Planetary Nebula NGC 7027
Péquignot, D. **78**, 29
- On the Radial Velocity of the Central Star of NGC 1360
Wehmeyer, R., Kohoutek, L. **78**, 39
- Limits to the Incidence of Planetary Nebulae in Globular Clusters
Phillips, J.P. **79**, 31
- Photoionization Models for Gaseous Nebulae. II. Optically Thin Condensations
Köppen, J. **80**, 42
- An Abundance Gradient for Gaseous Magnesium in the Planetary Nebula NGC 7027
Péquignot, D., Stasińska, G. **81**, 121
- Kinematics of Planetary Nebulae. I.
Purgathofer, A., Perinotto, M. **81**, 215
- Charge Transfer Reactions in Some Astrophysical Situations
Péquignot, D. **81**, 356
- A Radio Search for Planetary Nebulae near the Galactic Center II. Flux Density Distribution
Isaacman, R. **81**, 359
- Photoionization Models for Gaseous Nebulae: III. Third Period Elements
Köppen, J. **81**, 389; **39**, 77
- The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky. VII
Holmberg, E.B., Lauberts, A., Schuster, H.E., West, R.M. **82**, 394; **39**, 173
- Charge Transfer Reactions. II. A Photoionization Model of the Planetary Nebula NGC 7662
Péquignot, D. **83**, 52
- Spectroscopic Observations of the Compact Planetary Nebula M 4-18
Sabbadin, F. **84**, 216
- The Far Ultraviolet Emission of the Central Stars of Planetary Nebulae
Natta, A., Pottasch, S.R., Preite-Martinez, A. **84**, 284
- High Dispersion EUV Observations of Planetary Nebulae
Köppen, J., Wehrse, R. **85**, L15
- On the Structure of the Nebula M 2-9
Kohoutek, L., Surdej, J. **85**, 161
- Physical Conditions and Abundances of CNO Elements in NGC 7027
Perinotto, M., Panagia, N., Benvenuti, P. **85**, 332
- A Search for Planetary Nebulae on the "POSS"
Dengel, J., Hartl, H., Weinberger, R. **85**, 356
- A Radio Search for Planetary Nebulae near the Galactic Center. III. VLA and Optical Observations of Three Objects
Isaacman, R., Wouterloot, J.G.A., Habing, H.J. **86**, 254
- A Huge New Nearby Planetary Nebula
Purgathofer, A., Weinberger, R. **87**, L5
- Distances of Planetary Nebulae
Maciel, W.J., Pottasch, S.R. **88**, 1
- M1-2, a Possible Eclipsing Binary Planetary Nebula Central Star
Drummond, J.D. **88**, L11
- The Relationship between the Envelope Composition of a 6 M Red-giant Model and its Future Evolution
Prialnik, D., Shaviv, G. **88**, 127
- A New Faint Planetary Nebula behind the H II Region S 232 and Close to the Galactic Anticenter
Purgathofer, A. **88**, 275
- Two Southern Planetary Nebulae: ESO 263-PN 02 and SchuWe-3
West, R.M., Schuster, H.-E. **88**, 350
- Relations between Chemical, Spatial, and Kinematic Properties of Planetary Nebulae
Acker, A. **89**, 33
- Masses of Planetary Nebulae
Pottasch, S.R. **89**, 336
- Charge Transfer of Ne^{2+} with Helium
Dalgarno, A., Butler, S.E., Heil, T.G. **89**, 379
- Spectroscopic Observations of Galactic Nebulae and Galaxies with the Imaging Photon Counting System (IPCS)
Hua, C.T., Donas, J., Doan, N.H. **90**, 8
- The Disappearance of V-V 1-7 and the Nature of Its Central Star
Méndez, R.H., Lee, P., O'Brien, A., Liller, W. **91**, 331
- Erratum: The Far Ultraviolet Emission of the Central Stars of Planetary Nebulae
Natta, A., Pottasch, S.R., Preite-Martinez, A. **91**, 378
- Evolution of 1.2 M_{\odot} Star and the Formation of Planetary Nebulae
Harpaz, A., Kovetz, A. **93**, 200
- Hot Central Stars of Planetary Nebulae
Pottasch, S.R. **94**, L13
- Photographic and Spectroscopic Observations of Planetary Nebulae
Sabbadin, F., Hamzaoglu, E. **94**, 25
- The Effect of Dust in Planetary Nebulae on Determinations of Zanstra Temperatures of the Central Stars
Helfer, H.L., Herter, T., Lacasse, M.G., Savedoff, M.P., Van Horn, H.M. **94**, 109
- Monochromatic Observations of NGC 6720 in [O III] Lines
Louise, R. **94**, 160
- Advanced Evolutionary Stages of Intermediate-mass Stars. I. Evolution of Surface Compositions
Renzini, A., Voli, M. **94**, 175
- Study of Selected Stellar Planetary Nebulae
Kohoutek, L., Martin, W. **94**, 365
- A Radio Search for Planetary Nebulae Near the Galactic Center. V. Mass Models of the Bulge
Isaacman, R. **95**, 46
- The Central Star of a Planetary Nebula
Kovetz, A., Harpaz, A. **95**, 66
- Wavelengths and Profiles of the [S III] $^3P_2, 1^{-1}D_2$ Lines in Some Emission Nebulae
Hippelein, H., Münch, G. **95**, 100
- An Ultraviolet Study of NGC 7662
Benvenuti, P., Perinotto, M. **95**, 127
- Radio Observations of Planetary Nebulae at 6 cm
Mross, R., Weinberger, R., Hartl, H. **95**, 209; **43**, 75

- Catalog and Bibliographical Index of Planetary Nebulae (Magnetic Tape and Microfiche)
Acker, A., Marcout, J., Ochsenbein, F. **95**, 395; **43**, 265
- Radio Recombination Line Observations of Nearby Planetary Nebulae
Walmsley, C.M., Churchwell, E., Terzian, Y. **96**, 278
- Comments on Smoothed Particle Hydrodynamics
Schüssler, M., Schmitt, D. **97**, 373
- Fabry-Perot Radial Velocities of S 274: A Planetary Nebula
Recillas-Cruz, E., Pismis, P. **97**, 398
- The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky - VIII
Lauberts, A., Holmberg, E.B., Schuster, H.-E., West, R.M. **97**, 415; **43**, 307
- A Radio Search for Planetary Nebulae Near the Galactic Center. IV. Survey Data
Isaacman, R. **97**, 416; **43**, 405
- On the Double Shell and the Temperature of the Ring Lyrae Nebula
Louise, R., Lombard, J. **98**, 81
- Study of Compact Planetary Nebulae. II. Temperatures, Luminosities and Problems of Evolution of the Central Stars
Martin, W. **98**, 328
- Monochromatic and Interferometric Observations of the Dumbbell Nebula (NGC 6853)
Hua, C.T., Louise, R. **98**, 397
- Statistics of Planetary Nebulae
Maciel, W.J. **98**, 406
- Absorption Lines in the Visual Spectrum of the "Continuous" Central Star of the Planetary Nebula NGC 3242
Kudritzki, R.P., Méndez, R.H., Simon, K.P. **99**, L15
- Distances of Planetary Nebulae II
Maciel, W.J. **99**, 205; **44**, 123
- On the Variability of the [O III] 4363/H γ 4340 Line Ratio in the Young Planetary Nebula IC 4997 in 1979-1980
Purgathofer, A., Stoll, M. **99**, 218
- Detection of Six New Extended Planetary Nebulae by Means of Interference Filter Photography
Weinberger, R., Sabbadin, F. **100**, 66
- UV Spectroscopy of Planetary Nebulae
Perinotto, M., Benvenuti, P. **100**, 241
- Study of Compact Planetary Nebulae I. Absolute Fluxes
Kohoutek, L., Martin, W. **100**, 331; **44**, 325
- The Planetary Nebula NGC 7009
Perinotto, M., Benvenuti, P. **101**, 88
- A Model for V 1016 Cyg Based on the Ultraviolet Spectrum
Nussbaumer, H., Schild, H. **101**, 118
- Kinematics of Planetary Nebulae. II
Purgathofer, A., Perinotto, M. **101**, 247
- Erratum: Absorption Lines in the Visual Spectrum of the "Continuous" Central Star of the Planetary Nebula NGC 3242
Kudritzki, R.P., Méndez, R.H., Simon, K.P. **101**, 276
- A Spectral Description and Non-LTE Analysis of 6 Central Stars of Planetary Nebulae
Méndez, R.H., Kudritzki, R.P., Gruschinske, J., Simon, K.P. **101**, 323
- The Ultraviolet Spectrum of the Planetary Nebula NGC 2371 and its Exciting Star
Pottasch, S.R., Gathier, R., Gilra, D.P., Wesselius, P.R. **102**, 237
- Line Widths in Peculiar Emission Line Objects
Swings, J.P., Andrillat, Y. **103**, L3
- Late Stages of Stellar Evolution: Central Stars of Planetary Nebulae
Schönberner, D. **103**, 119
- Spectral and Polarization Characteristics of the Supernova Remnant CTA 1
Sieber, W., Salter, C.J., Mayer, C.J. **103**, 393
- Optical Positions for Northern Stellar Planetary Nebulae
Blackwell, S.R., Purton, C.R. **104**, 169; **46**, 181
- Planetary Nebulae with Close Binary Central Stars
Livio, M. **105**, 37
- Spectral Variations and Evidence for Edge and/or Line Locking Mechanism(s) in the Low-Excitation Planetary Nebula HD 138403
Surdej, A., Surdej, J., Swings, J.P. **105**, 242
- The Distance to the Planetary Nebula NGC 7027
Pottasch, S.R., Goss, W.M., Arnal, E.M., Gathier, R. **106**, 229
- The Kinematical Structure of the Bipolar Nebula AFGL 618
Carsenty, U., Solf, J. **106**, 307
- Observations and Morphological Study of Ring Planetary Nebulae in [O III] (Text in French)
Louise, R. **107**, 416; **47**, 575
- Stellar Wind in the Nucleus of IC 2149
Perinotto, M., Benvenuti, P., Cerruti-Sola, M. **108**, 314
- The Expansion Velocity Field Within the Planetary Nebulae NGC 40 and NGC 7026
Sabbadin, F., Hamzaoglu, E. **109**, 131
- Abundances in the Planetary Nebula NGC 6853
Pottasch, S.R., Gilra, D.P., Wesselius, P.R. **109**, 182
- Planetary Nebulae with Close Binary Nuclei-corrections to Angular Momentum Loss
Salzman, J., Livio, M., Shaviv, G. **109**, 201
- On the Origin of Planetary Nebulae
Nussbaumer, H. **110**, L1
- Internal Motions in Planetary Nebulae
Sabbadin, F., Hamzaoglu, E. **110**, 105
- NGC 2440: Ionization Structure, Extinction, and Near Infrared Spectrum
Condal, A.R. **112**, 124
- Forbidden Emission Lines of Fe VII
Nussbaumer, H., Storey, P.J. **113**, 21
- Detection and Study of Secondary Structures in Some Planetary Nebulae
Louise, R. **114**, 205
- Discovery of a Large, High-excitation Planetary Nebula at $l = 136^\circ$, $b = +5^\circ$
Heckathorn, J.N., Fesen, R.A., Gull, T.R. **114**, 414
- The Expansion Velocity Field Within the Planetary Nebulae NGC 1501 and NGC 6905
Sabbadin, F., Hamzaoglu, E. **114**, 419; **50**, 1
- Electron Densities from the O IV λ 1401 Multiplet
Nussbaumer, H., Storey, P.J. **115**, 205
- Radio Observations at 14.7 GHz of Southern Planetary Nebulae
Milne, D.K., Aller, L.H. **115**, 217; **50**, 209
- Observations of Bipolar Planetary Nebula 19W32
Kohoutek, L. **115**, 420
- The Unprecedented Light Variations of NGC 2346
Méndez, R.H., Gathier, R., Niemela, V.S. **116**, L5
- The Far-UV Spectrum of the Low-excitation Planetary Nebula HD 138403
Surdej, J., Heck, A. **116**, 80
- Interpretation of Line Profiles of the Symbiotic Star V 1016 Cyg
Kindl, C., Marxer, N., Nussbaumer, H. **116**, 265

- Ansa and the precession of central stars in planetary nebulae: the cases of NGC 5189 and NGC 6826
Phillips, J.P., Reay, N.K. **117**, 33
- Spatial-kinematical models for planetary nebulae: NGC 2371-2
Sabbadin, F., Bianchini, A., Hamzaoglu, E. **117**, 172; **50**, 523
- Morphological study of three Abell's planetary nebulae: A 33, A 36, and A 79
Hua Chon-Trung, Nguyen-Trong, T. **117**, 272
- The O III/O II problem in medium and high excitation planetary nebulae
Che, A., Köppen, J. **118**, 107
- Internal motions in planetary nebulae: NGC 7354, I 289 and Hu 1-2
Sabbadin, F., Bianchini, A., Hamzaoglu, E. **118**, 210; **51**, 127
- A rediscussion of sulfur abundances in Magellanic Clouds and Galactic H II regions
Dennefeld, M., Stasińska, G. **118**, 234
- The upper mass limit for white dwarf progenitors and the initial-mass relation for low and intermediate mass stars
Weidemann, V., Koester, D. **121**, 77
- Models of the planetary nebulae II 2003, NGC 3242, 6210, and 7009: constraints on the ionizing radiation of the central star
Köppen, J. **122**, 95
- Profiles and intensity ratios of the C IV λ 1548, 1550 emission lines in planetary nebulae
Feibelman, W.A. **122**, 335
- Radio structure of the low excitation planetary nebula M 1-6
Kwok, S., Purton, C.R. **122**, 346
- The strength of the C IV 1550 Å resonance lines in planetary nebulae
Köppen, J., Wehrse, R. **123**, 67
- M1-77: a peculiar planetary nebula
Sabbadin, F., Ortolani, S., Bianchini, A., Gratton, R.G., Strafella, F. **123**, 147
- Internal motions in ten planetary nebulae
Sabbadin, F., Bianchini, A., Hamzaoglu, E. **123**, 358; **52**, 395
- The expansion velocity field within the planetary nebula NGC 7008
Sabbadin, F., Ortolani, S., Bianchini, A., Hamzaoglu, E. **123**, 359; **52**, 399
- The temperature of central stars of planetary nebulae: the energy-balance method
Preite-Martinez, A., Pottasch, S.R. **126**, 31
- The ultraviolet variability of the symbiotic star HBV 475
Nussbaumer, H., Schmutz, W. **126**, 59
- Planetary nebulae with massive nuclei. I. Time-dependent photoionization models
Tylenda, R. **126**, 299
- The binary nature of the central star of the planetary nebula LT-5
Schnell, A., Purgathofer, A. **127**, L5
- A VLA observation of the planetary nebula K 648 in Messier 15
Gathier, R., Pottasch, S.R., Goss, W.M. **127**, 320
- Ground-based infrared spectrophotometry of evolved objects and late-type stars
Eiroa, C., Hefele, H., Zhong-yu, Q. **128**, 262; **54**, 309
- Index and cross-identification of planetary nebulae
Acker, A., Marcout, J., Ohsenbein, F., Lortet, M.C. **128**, 262; **54**, 315
- VLA observations of planetary nebulae at the Galactic Centre
Gathier, R., Pottasch, S.R., Goss, W.M., van Gorkom, J.H. **128**, 325
- The nature of the radio source in M3
McLean, B.J., Viner, M.R., Hughes, V.A. **128**, 434
- Planetary System**, see Cosmogony
- Third Order Theory of the Four Large Planets
Simon, J.L., Francou, G. **103**, 223
- Star-planet systems as progenitors of cataclysmic binaries: tidal effects
Livio, M., Soker, N. **125**, L12
- Planets**, see also under the individual names of Planets
- The Formation of Planets and Satellites from Self-similar Disks
Wesson, P.S. **76**, 200
- Self-Similarity and the Angular Momenta of Astronomical Systems. A Basic Rule in Astronomy
Wesson, P.S. **80**, 296
- Second Order Theory of the Inner Planets
Bretagnon, P. **84**, 329
- Positions d'astéroïdes, de grosses planètes et de la Lune
Soulié, G., Dupouy, Teulet, Broqua, Dulou **95**, 211; **43**, 146
- Relativistic Perturbations of Planetary Orbits in the Generalized Three-parametric Schwarzschild Metric. The Case of Mercury
Lestrade, J.-F. **100**, 143
- Construction of a Theory of the Outer Planets Through an Iterative Method
Bretagnon, P. **101**, 342
- A Direct Method of Computing Small Divisors in Planetary Theory
Dvorak, R. **108**, 14
- Integration Constants and Mean Elements for All the Planets
Bretagnon, P. **108**, 69
- Theory for the Motion of All the Planets. The VSOP82 Solution (in French)
Bretagnon, P. **114**, 278
- Orientation of the JPL Ephemerides, DE 200/LE 200, to the Dynamical Equinox of J 2000
Standish, E.M., Jr. **114**, 297
- Surface Marking Variations of Selected Areas on Mars
de Mottoni y Palacios, G., Dollfus, A. **116**, 323
- A determination of the masses of Saturn and Uranus from the motion of the minor planets (944) Hidalgo and (2060) Chiron (text in German)
Landgraf, W. **119**, 95
- Theory for the motion of the four large planets. The solution TOP 82 (Text in French)
Simon, J.L. **120**, 197
- Hydrogen at high pressures and temperatures
Robnik, M., Kuntz, W. **120**, 227
- Quasi-axisymmetric circulation and superrotation in planetary atmospheres
Mayr, H.G., Harris, I. **121**, 124
- Excitation of violent discharge of charged bodies
Lafon, J.-P.J., Millet, J.M. **123**, 73
- The surface texture of the Martian soil from the Soviet spacecraft Mars-5 photopolarimeters
Dollfus, A., Deschamps, M., Ksanfomaliti, L.V. **123**, 225
- DE 102: a numerically integrated ephemeris of the Moon and planets spanning forty-four centuries
Newhall, X.X., Standish, E.M. Jr., Williams, J.G. **125**, 150
- Observations of Jupiter with the astrolabe of the CERGA Observatory (February 1980-May 1981)
Vigouroux, G., Dugonon, G., Granès, P., Mignard, F., Pham-Van, J. **126**, 221; **53**, 361

A heterodyne spectrometer for astronomical measurements at 10 micrometers

Rothermel, H., Käufel, H.U., Yu, Y. **126**, 387

Fundamental relationships relevant to the transfer of polarized light in a scattering atmosphere

Hovenier, J.W., van der Mee, C.V.M. **128**, 1

Plasma Physics, see also Alfvén Waves, Gas Dynamics, Hydrodynamics

Energy Levels in Debye Field

Barcza, S. **72**, 26

The Fluctuations of Flux from Limited Solar Areas at Radio Frequencies and Propagation of Waves in the Coronal Plasma

Butz, M., Hirth, W., Fürst, E. **72**, 211

The "Head-On" Approximation in Second Harmonic Plasma Emission

Melrose, D.B., Stenhouse, J.E. **73**, 151

Stochastic Diffusion of Photons in an Unstable Turbulent and Magnetized Plasma

Mangeney, A., Veltri, P. **73**, 292

Cerenkov Radiation of a Charged Particle Moving in a Magnetized, Cold Plasma (Pulsar Magnetosphere)

Heintzmann, H., Nitsch, J. **74**, 263

The Stark Width of the Ar I-Line 3949 Å in a Medium Electron Density Plasma

Röndigs, G., Kusch, H.J. **75**, 182

Parametric Instabilities of Commensurable Nonlinear Plasma Waves

Luheshi, M., Stewart, P. **75**, 185

Photon Pair Production in Astrophysical Transrelativistic Plasmas

Stoeger, W.R., S.J. **78**, 124

Effects of Cyclotron Absorption in Hot Strongly Magnetized Plasma

Yahel, R.Z. **78**, 136

The Interpretation of N IV and N VII Emission Line Ratios in the Sun

Dufton, P.L., Doyle, J.G., Kingston, A.E. **78**, 318

Radiation Opacity in a Dense Plasma

Aharony, U., Opher, R. **79**, 27

Numerical Solutions of the Trans-relativistic Shock Relations

Fujimura, F.S., Kennel, C.F. **79**, 299

The Role of Plasma Effects in Generating High-velocity and Symmetric Spectral Features in Galactic Masers

Burdjuzha, V.V., Charugin, V.M., Tomozov, V.M. **79**, 306

Turbulent Bremsstrahlung of Langmuir Waves

Kuijpers, J. **83**, 201

New Atomic Data for Fe⁺¹⁹

Bhatia, A.K., Mason, H.E. **83**, 380

On Shear Layers in Double Radio Sources

Nepveu, M. **84**, 14

On the Breaking of the First Adiabatic Invariant in the Magnetic Fields Arising from the Mirror Instability

Hall, A.N. **84**, 40

Magneto-parametric Instabilities IV

Luheshi, M., Stewart, P. **86**, 163

Analysis of X-ray Line Spectra From a Transient Plasma Under Solar Flare Conditions. II. Rate Coefficients

Mewe, R., Schrijver, J., Sylwester, J. **86**, 268; **40**, 323

Analysis of X-ray Line Spectra from a Transient Plasma Under Solar Flare Conditions. III. Diagnostics for Measuring Electron Temperature and Density

Sylwester, J., Mewe, R., Schrijver, J. **86**, 268; **40**, 335

The General Dispersion Relation for the Vibration Modes of Magnetic Flux Tubes

Wilson, P.R. **87**, 121

Analysis of X-ray Line Spectra from a Transient Plasma under Solar Flare Conditions. I. General Outline

Mewe, R., Schrijver, J. **87**, 261

Strong Langmuir Wave Turbulence: Some Results with Self-consistent Landau Damping

van Grunsven, T.F.J., Hoyng, P., Nicholson, D.R. **91**, 7

Impulsive Electron Acceleration to Energies of Tens of kT_e by Langmuir Wave Turbulence

Hoyng, P., Duijveman, A., van Grunsven, T.F.J., Nicholson, D.R. **91**, 17

Alfvén-driven Cyclotron Corona as a Model for Quasar Infrared

Zurek, W.H. **91**, 90

On the Electrostatic Potential of Interplanetary Grains: Influence of the Thermoionic Effect

Millet, J., Lafon, J.P.L., Lamy, Ph.L. **92**, 6

Stability of Strong Linearly Polarized Electromagnetic Waves in Dense Plasmas

Che, A., Kegel, W.H. **92**, 204

Collimation of Electromagnetic Beams in Extragalactic Radio Sources

Ferrari, A., Massaglia, S., Dobrowolny, M. **92**, 246

The Polarization of the Tail Radio Source B2 1615+35. A Discussion of the Physical Conditions and Acceleration Mechanism in a Tail Radio Source

Fanti, R., Lari, C., Parma, P., Ekers, R.D. **94**, 61

Coronal Evolution and Solar Type I Radio Bursts: An Ion-acoustic Wave Model

Benz, A.O., Wentzel, D.G. **94**, 100

On the Heliocentric Distance Dependence of Plasmon Emission in Type III Bursts

de Genouillac, G.V., Escande, D.F. **94**, 219

On the Electrostatic Potential and Charge of Cosmic Grains. I. Theoretical Background and Preliminary Results

Lafon, J.-P.J., Lamy, Ph.L., Millet, J. **95**, 295

Propagation of Electromagnetic Waves through Magnetized Plasmas in Arbitrary Gravitational Fields

Breuer, R.A., Ehlers, J. **96**, 293

Spectral and Angular Distribution of Synchro-compton Radiation in a Linearly Polarized Vacuum Wave of Arbitrary Intensity

Leubner, C. **96**, 373

Plasma Corrections to Dipolar Radio Emission by Cosmic Grains

Meyer-Vernet, N. **97**, 208

The Stability of Solar Coronal Loops with Realistic Photospheric Boundary Conditions

Van Hoven, G., Ma, S.S., Einaudi, G. **97**, 232

On the Nature of Small Amplitude Fermi Acceleration

Achterberg, A. **97**, 259

On the Propagation of Relativistic Particles in a High β Plasma

Achterberg, A. **98**, 161

Possible Slowdown of the Plasma Wave Sources Associated with Type III Radio Bursts

de Genouillac, G.V., Escande, D.F. **99**, L18

Solar Type I Radio Bursts: Shock Model

Wentzel, D.G. **100**, 20

Self-consistent Solutions for Electromagnetic Plane Waves in a Relativistic Plasma

Che, A., Herold, H., Reinecke, M., Ruder, H., Wunner, G. **100**, 164

On the Computation of Constant α Force-free Magnetic Field

Alissandrakis, C.E. **100**, 197

- Physical Conditions in an Optically Thin Relativistic Gas Irradiated by γ -rays
Kovner, I., Milgrom, M. **100**, 271
- The Polarization of Second Harmonic Radio Emission in Type III Bursts
Zlotnik, E. Ya. **101**, 250
- Erratum: Possible Slowdown of the Plasma Wave Sources Associated with Type III Radio Bursts
de Genouillac, G.V., Escande, D.F. **101**, 350
- On the Transfer Equation for the Cyclotron Line in Her X-1
Melrose, D.B. **101**, 284
- Influence of a Dense Plasma on Ions with K-electrons
Pilkuhn, H., Reddmann, T. **101**, 350
- Runaway Acceleration in a Radio Flare
Kuijpers, J., van der Post, P., Slottje, C. **103**, 331
- The Unsteady Beam
Nepveu, M. **105**, 15
- Solar Type I Noise Storms and Newly Emerging Magnetic Flux
Spicer, D.S., Benz, A.O., Huba, J.D. **105**, 221
- Search for Harmonic Emission in Solar Type I Radio Bursts
Jaeggi, M., Benz, A.O. **107**, 88
- The Fokker-Planck Equation for the Radiation Transfer in a Strongly Magnetized Plasma
Bonazzola, S. **108**, 19
- Diffusion of Keplerian Motions by a Stochastic Force. I. A General Formalism
Barge, P., Pellat, R., Millet, J. **109**, 228
- The Effects of Non-equilibrium Ionization on the X-ray Emission of Supernova Remnants
Gronenschild, E.H.B.M., Mewe, R. **110**, 180; **48**, 305
- The Anomalous Braking Index of the Crab Pulsar: A Plasma Inertial Effect
Heintzmann, H., Schröder, E. **111**, L4
- Monte Carlo Study of Highly Polarized Cool Stars
Daniel, J.-Y. **111**, 58
- A Diffuse Component of Solar Electron Streams as a Possible Source of Decametric and Hectometric Continuum
Levin, B.N. **111**, 71
- Blowing up of Two-dimensional Magnetohydrostatic Equilibria by an Increase of Electric Current or Pressure
Heyvaerts, J., Lasry, J.M., Schatzman, M., Witomsky, P. **111**, 104
- Transformation of Magnetogravitational Waves in the Solar Atmosphere
Zhugzhda, Y.D., Dzhalilov, N.S. **112**, 16
- The Importance of Plasma Effects on Electron-cyclotron Maser-emission from Flaring Loops
Sharma, R.R., Vlahos, L., Papadopoulos, K. **112**, 377
- On the Self-consistent Solutions of Pulsar Plasma Waves
Chian, A.C.-L. **112**, 391
- Plasma-magnetospheric Interaction in X-ray Sources: An Analysis of the Linear Kelvin-Helmholtz Instability
Wang, Y.-M., Welter, G.L. **113**, 113
- Structure of Dynamics of Supersonic Jets
Norman, M.L., Smarr, L., Winkler, K.-H. A., Smith, M.D. **113**, 285
- Comments on Radial White Dwarf Accretion
Kuijpers, J., Pringle, J.E. **114**, L4
- Vlasov Equation?
Hénon, M. **114**, 211
- Local Coupling of Surface MHD Waves with Kinetic Alfvén Waves in Jets
Bodo, G., Ferrari, A. **114**, 394
- Cyclotron Emission in Strongly Magnetized Plasmas
Herold, H., Ruder, H., Wunner, G. **115**, 90
- Stationary Spherical Accretion into Black Holes. The Transition from the Optically Thin to the Optically Thick Regime
Soffel, M.H. **116**, 111
- Non-linear Theory of Cosmic Ray Shocks Including Self-generated Alfvén Waves
McKenzie, J.F., Völk, H.J. **116**, 191
- Pressure distribution at the inner boundary of an astropause caused by a compressible stellar wind
Fahr, H.J., Neutsch, W. **118**, 57
- Coulomb bremsstrahlung and cyclotron emissivity in hot magnetized plasmas
Nagel, W., Ventura, J. **118**, 66
- Cosmic-ray shock acceleration in the presence of self-excited waves
Lagage, P.O., Cesarsky, C.J. **118**, 223
- Relativistic coherent curvature radiation
Benford, G., Buschauer, R. **118**, 358
- Grains spin-up by inverse Cerenkov effect
Meyer-Vernet, N. **119**, 117
- Modification of scattering waves and its importance for shock acceleration
Achterberg, A. **119**, 274
- Plasma effects on Doppler measurements of interplanetary spacecraft. I. Discontinuities and waves
Iess, L., Dobrowolny, M., Bertotti, B. **121**, 203
- Dissipative thermal models for solar microwave burst delays
Brown, J.C., MacKinnon, A.L., Zodi, A.M., Kaufmann, P. **123**, 10
- The role of non-linear Landau damping in cosmic ray shock acceleration
McKenzie, J.F., Bond, R.A.B. **123**, 111
- Comments on the solar neutrino problem
Opher, R. **125**, L9
- Neutrino energy production spectra in a relativistic plasma
Giovannelli, F., Karakula, S., Tkaczyk, W. **125**, 121
- Neutrino emission from black holes
Giovannelli, F., Karakula, S., Tkaczyk, W. **125**, 126
- The maximum energy of cosmic rays accelerated by supernova shocks
Lagage, P.O., Cesarsky, C.J. **125**, 249
- Propagation of high frequency waves in strongly magnetized plasmas. Mode ambiguities due to vacuum polarization
Soffel, M., Ventura, J., Herold, H., Ruder, H., Nagel, W. **126**, 251
- Hadron resonance cooling of relativistic $e^+ - e^-$ plasmas
Schlickeiser, R. **127**, 201
- Pluto**
- Accurate Astrometric Positions of Pluto, 1975-1978
Jensen, K.S. **75**, 260; **36**, 395
- Representations of Perturbations Brought by Pluto on the Large Planets
Piroux, J. **79**, 132
- Astrometric Positions of Pluto from 1973 to 1979
Zappalà, V., de Sanctis, G., Ferreri, W. **87**, 253; **41**, 29
- Speckle Interferometry with the CFHT 3.60 m. I. Resolution of the System Pluto-Charon
Bonneau, D., Foy, R. **92**, L1
- On a Possible Origin of Charon
Mignard, F. **96**, L1

- Positions of Jupiter, Galilean Satellites and Pluto Obtained in May 1980 with the GPO of the ESO, La Silla
Debehogne, H., Machado, L.E., Caldeira, J.F., Netto, E.R., Vieira, G.G. **103**, 210; **46**, 131
- Astrometric positions of Pluto from 1980 to 1982
Zappalà, V., De Sanctis, G., Ferreri, W. **119**, 324; **51**, 385
- Polarization**, see also Faraday Rotation and under the different Objects
- Estimates of the Depolarization Parameter and Ionized Hydrogen Mass of 3 C Quasars
Cohen, N.L. **71**, 362
- A List of Zero-polarization Standards
Tinbergen, J. **72**, 379; **35**, 325
- Polarization Measurements and Extinction near the North Galactic Pole
Markkanen, T. **74**, 201
- On Polarization by Dust in the Mid-infrared
Thronson, H.A., Jr. **75**, 236
- Polarization Effects on the Free-free Transitions of H⁺
John, T.L. **75**, 249
- Studies of Polarization at 1.4 GHz of 66 Low Luminosity Radio Galaxies
Gioia, I.M., Gregorini, L. **75**, 259; **36**, 347
- Periodic Polarization Variations in Rotating Astrophysical Systems
Milgrom, M. **76**, 338
- The Calculation of Faraday Rotation Measures of Cosmic Radio Sources
Ruzmaikin, A.A., Sokoloff, D.D. **78**, 1
- Statistically Rigorous Reduction of Stellar Polarization Measurements
von der Heide, K., Knoechel, G. **79**, 22
- The Evolution of Polarization in Type U Solar Radio Bursts
Benz, A.O., Urbarz, H.W., Zlobec, P. **79**, 216
- Polarization Measurements of 313 Nearby Stars
Krautter, J. **82**, 393; **39**, 167
- A Catalogue of Linear Polarization of Radio Sources
Tabara, H., Inoue, M. **83**, 384; **39**, 379
- Resonance-line Polarization. IV. Observations of Non-magnetic Line Polarization and Its Center-to-limb Variations
Stenflo, J.O., Baur, T.G., Elmore, D.F. **84**, 60
- Resonance-line Polarization. V. Quantum-mechanical Interference between States of Different Total Angular Momentum
Stenflo, J.O. **84**, 68
- Monte Carlo Analysis of Polarization by Thomson Scattering in Circumstellar Envelopes
Daniel, J.Y. **86**, 198
- The Rotation Measures of Radio Sources and Their Data Processing
Vallée, J.P. **86**, 251
- Monte Carlo Analysis of Polarization by Mie Scattering in Circumstellar Envelopes
Daniel, J.-Y. **87**, 204
- Resonance-line Polarization. VI. Line Wing Transfer Calculations Including Excited State Interference
Auer, L.H., Rees, D.E., Stenflo, J.O. **88**, 302
- The Distribution of the Interstellar Dust in the Galactic Plane within 3 kpc
Krautter, J. **89**, 74
- A Polarimetric Study of U Cephei. Part I
Pirola, V. **90**, 48
- Circular Polarization as a Probe of Radio Sources (High Accuracy Polarization Measurements at λ 49 cm)
Weiler, K.W., de Pater, I. **91**, 41
- A Critique of the Polarimetric Evidence on the Nature of Cygnus X-1
Simmons, J.F.L., Aspin, C., Brown, J.C. **91**, 97
- On the Phase-locked Polarization Variations in Cygnus X-1
Kemp, J.C. **91**, 108
- Numerical Simulation of Poynting-Robertson and Collisional Effects in the Interplanetary Dust Cloud
Trulsen, J., Wikan, A. **91**, 155
- Bisymmetric Open-spiral Configuration of Magnetic Fields in the Galaxies M 51 and M 81
Sofue, Y., Takano, T., Fujimoto, M. **91**, 335
- A High-accuracy Optical Polarization Analyser
Semel, M. **91**, 369
- Variable Linear Polarization in the X-ray Binary HD 77581
Korhonen, T., Pirola, V. **91**, 372
- Near Infrared Polarimetry of Cool Stars
McCall, A., Hough, J.H. **91**, 379; **42**, 141
- Further Observations of the Head-tail Radio Galaxy PKS 2247+11
Robertson, J.G. **93**, 113
- The Polarization of the Tail Radio Source B2 1615+35. A Discussion of the Physical Conditions and Acceleration Mechanism in a Tail Radio Source
Fanti, R., Lari, C., Parma, P., Ekers, R.D. **94**, 61
- The Wavelength Dependence of Linear Polarization in T Tauri Stars
Bastien, P. **94**, 294
- Measurement of Solar Disc Polarization in a Number of Fraunhofer Lines and Their Adjacent Continuum. III. Comparison with Independent Measurements and with Calculations
Wiehr, E. **95**, 54
- Polarization of Starlight in M 17
Schulz, A., Lenzen, R., Schmidt, Th., Proetel, K. **95**, 94
- Linear Polarization Observations of Extragalactic Radio Sources at λ 2 cm and at 17-19 cm
Simard-Normandin, M., Kronberg, P.P., Neidhöfer, J. **95**, 208; **43**, 19
- Multicolor Linear Polarimetry of Betelgeuse and Antares
Tinbergen, J., Greenberg, J.M., de Jager, C. **95**, 215
- Multifrequency Observations of Very Large Radio Galaxies. III: NGC 315
Willis, A.G., Strom, R.G., Bridle, A.H., Fomalont, E.B. **95**, 250
- Linear Polarization Measurements at λ 11 cm
Parma, P., Weiler, K.W. **96**, 412
- 2.7 GHz Observations of the Three Old Supernova Remnants CTB1, G116.5+1.1, and G114.3+0.3 with the Effelsberg 100-m Telescope
Reich, W., Braunsfurth, E. **99**, 17
- Infrared Reflection Nebulae in S 106 and NGC 7538 E
Tokunaga, A.T., Lebofsky, M.J., Rieke, G.H. **99**, 108
- Determination of the Complete Vector Magnetic Field in Solar Prominences, Using the Hanle Effect
Bommier, V., Leroy, J.L., Sahal-Bréchet, S. **100**, 231
- Polarization of Starlight in W 3
Lenzen, R., Schulz, A., Schmidt, Th. **100**, 249
- A Polarimetric Study of U Cephei. Part II (Observations)
Pirola, R. **100**, 334; **44**, 461
- Study of Stellar Polarization with the CERGA Interferometer
Vakili, F. **101**, 352

- Photographic Polarization Survey with a Savart Plate
Röser, H.-J. **103**, 374
- Interstellar Polarization in the Immediate Solar Neighbourhood
Tinbergen, J. **105**, 53
- Radio Observations of the Giant Quasar 4C 34.47
Jägers, W., van Breugel, W., Miley, G.K., Schilizzi, R.T., Conway, R.G. **105**, 278
- Stability and Symmetry of Zodiacal Light Polarization in the Antisolar Hemisphere
Leinert, C., Planck, B. **105**, 364
- Observations of the Polarization of Average Pulsar Profiles at High Frequency
Morris, D., Graham, D.A., Sieber, W., Bartel, N., Thomasson, P. **106**, 180; **46**, 421
- A Survey of the Distribution of λ 2.8 cm Radio Continuum in Nearby Galaxies. II. NGC 6946
Klein, U., Beck, R., Buczyłowski, U.R., Wielebinski, R. **108**, 176
- Integrated Linear Polarization of Extragalactic Radio Sources at 10.5 GHz (λ 2.86 cm). II
Simard-Normandin, M., Kronberg, P.P., Button, S. **108**, 416; **48**, 137
- A Linear Polarization Survey of T Tauri Stars
Bastien, P. **108**, 417; **48**, 153
- On the Phase Matrix Basic to the Scattering of Polarized Light
Siewert, C.E. **109**, 195
- Fine Structure near the Starting Frequency of Solar Type III Radio Bursts
Benz, A.O., Zlobec, P., Jaeggi, M. **109**, 305
- Expected Broadband Linear Polarization from Cool Stars with Magnetic Structures
Landi Degl'Innocenti, E. **110**, 25
- Multifrequency Comparison of the Total Intensity and Polarization Distributions for 3C 31, 3C 66 B, and 3C 129
van Breugel, W. **110**, 225
- Polarimetric Observations of HD 199178 - an FK Comae Type Star
Pirola, V., Vilhu, O. **110**, 351
- Helios Zodiacal Light Measurements - a Tabulated Summary
Leinert, C., Richter, I., Pitz, E., Hanner, M. **110**, 355
- GX339-4: Cyclotron Radiation from an Accretion Flow
Fabian, A.C., Guilbert, P.W., Motch, C., Ricketts, M., Ilavsky, S.A., Chevalier, C. **111**, L9
- Diagnostic of Coronal Magnetic Fields from Microwave Polarization Reversal
Bandiera, R. **112**, 52
- Multifrequency Observations of Extended Radio Galaxies V: 3C 31, 3C 33.1, 3C 35, 3C 66B, 3C 129, 3C 130, 3C 223, 3C 310, 3C 390.3 and 4C 48.29
Van Breugel, W., Jägers, W. **112**, 180; **49**, 529
- Two Colour Photometry and Polarimetry of the Solar Corona of 16 February 1980
Dürr, J. **112**, 241
- Observed Polarization of the Fe XIV 5303 Coronal Emission Line
Arnaud, J. **112**, 350
- Broadband Linear Polarization from Magnetized Stellar Atmospheres. Numerical Tables for the Magnetic Intensification Mechanism
Landi Degl'Innocenti, E., Calamai, G. **112**, 395; **49**, 677
- Geometry of Pulsar Beams: Relative Orientations of Rotation Axis, Magnetic Axis and Line of Sight
Narayan, R., Vivekanand, M. **113**, L3
- Non-LTE Resonance Line Polarization with Partial Redistribution Effects
Rees, D.E., Saliba, G.J. **115**, 1
- On Interstellar Linear Polarization and Grain Growth
Aarnestad, P.A. **115**, 219
- The Analysis of Fe XIV 5303 Coronal Emission-line Polarization Measurements
Arnaud, J. **116**, 248
- Reconstruction of a polarized brightness distribution by the maximum entropy method
Nityananda, R., Narayan, R. **118**, 194
- The rotation measures of radio sources in selected celestial zones - the Perseus Arm Window
Vallée, J.P. **118**, 210; **51**, 127
- Detection of large infrared polarization from L 1551 IRS 5
Nagata, T., Sato, S., Kobayashi, Y. **119**, L1
- Conductive flux in flaring solar chromospheres deduced from line linear polarization observations
Hénoux, J.C., Heristchi, D., Chambe, G., Machado, M., Woodgate, B., Shine, R., Beckers, J. **119**, 233
- Magnetic alignment of interstellar dust grains for dominating magnetic effects
Cugnon, P. **120**, 156
- Linear polarization variations of six T Tauri stars
Schulte-Ladbeck, R. **120**, 203
- A search for optical polarization of the Milky Way at $l = 150^\circ$ and $l = 223^\circ$
Leinert, C., Richter, I. **121**, 146
- New polarization measurements of HD 183143, HD 204827, and Cyg OB 2 Sch. No. 12
Schulz, A., Lenzen, R. **121**, 158
- Linear polarization observations in selected celestial zones: the anticentre region
Vallée, J.P. **121**, 163; **52**, 125
- Coherent scattering in the solar spectrum: survey of linear polarization in the range 3165-4230 Å
Stenflo, J.O., Twerenbold, D., Harvey, J.W. **121**, 164; **52**, 161
- Measurement of unambiguous rotation measures of extragalactic sources
Rudnick, L., Zukowski, E., Kronberg, P.P. **121**, 332; **52**, 317
- Evidence for evolving elongated pulsar beams
Narayan, R., Vivekanand, M. **122**, 45
- The surface texture of the Martian soil from the Soviet spacecraft Mars-5 photopolarimeters
Dollfus, A., Deschamps, M., Ksanfomaliti, L.V. **123**, 225
- Large-scale magnetic field in the Perseus spiral arm
Vallée, J.P. **124**, 147
- Broadband linear polarization from magnetized stellar atmospheres. II. The influence of damping on net spectral line polarization
Calamai, G., Landi Degl'Innocenti, E. **126**, 220; **53**, 311
- The statistical behaviour of normalized Stokes parameters
Clarke, D., Stewart, B.G., Schwarz, H.E., Brooks, A. **126**, 260
- WSRT observations of elliptical galaxies from the B2 catalogue
Feretti, L., Giovannini, G., Gregorini, L., Parma, P. **126**, 311
- A survey of the distribution of λ 2.8 cm radio continuum in nearby galaxies. IV. NGC 253
Klein, U., Urbanik, M., Beck, R., Wielebinski, R. **127**, 177
- Fundamental relationships relevant to the transfer of polarized light in a scattering atmosphere
Hovenier, J.W., van der Mee, C.V.M. **128**, 1

Populations

Population III Stars and the Shape of the Cosmological Black Body Radiation

Puget, J.L., Heyvaerts, J. **83**, L10

The Nature, Distribution and Evolution of Stellar Populations in the Small Magellanic Cloud

Brück, M.T. **87**, 92

An Optical and Radio Survey of the Nuclei of Bright Galaxies. Stellar Populations and Normal H II Regions

Heckman, T.M. **87**, 142

Population Synthesis of Giant Ellipticals. A Composite Approach

Alvarez-Falcon, J.M. **89**, 291

Positions, see Astrometry

Positions of asteroids obtained with the CERGA Schmidt telescope

Hahn, G., Heudier, J.L., Lagerkvist, C.I. **127**, 426; **54**, 191

Conversion matrix of epoch B 1950.0 FK 4-based positions of stars to epoch J 2000.0 positions in accordance with the new IAU resolutions

Aoki, S., Sôma, M., Kinoshita, H., Inoue, K. **128**, 128

Accurate equatorial coordinates of known or new components of some 200 double and multiple systems

Soulié, G. **128**, 261; **54**, 281

Jovian satellites and asteroid positions observed at la Silla-GPO. Comparison of different bijections

Debehogne, H. **128**, 262; **54**, 365

Precession

The Oblivity of the Ecliptic

Wittmann, A. **73**, 129

Precession Matrix Based on IAU (1976) System of Astronomical Constants

Lieske, J.H. **73**, 282

Advocating the Use of Vector-matrix Notation in Precession Theory

Fabri, E. **82**, 123

Precession and System Parameters in Early-type Binary Models for SS 433

Hut, P., van den Heuvel, E.P.J. **94**, 327

The Motion of the Earth-Moon System Between 1700 and 2100 in Newcomb's Theory and in JPL-Ephemerides

Stumpff, P. **101**, 52

On Some Possible Relativistic Effects in SS 433

Ruffini, R., Doo Jong Song, Stella, L. **103**, L7

Note on the Numerical Expressions for Precession Quantities

Bretagnon, P., Chapront, J. **103**, 103

Starspots in VW Cephei

Walter, K. **128**, 391

Pre-Main-Sequence-Stars, see also Herbig-Haro Objects, Protostars

On the Brightening of the Pre-main-sequence Star DR Tau

Chavarría, K.C. **79**, L18

New Compact Infrared Objects Associated with Two Southern Type-I OH Masers

Epchtein, N., Guibert, J., Nguyen-Quang-Rieu, Turon, P., Wamsteker, W. **97**, 1

Infrared Survey of Southern Galactic Maser Sources in the Longitude Range 320° to 30°

Epchtein, N., Lépine, J.R.D. **99**, 210

New Infrared Objects Towards Southern Type I OH and H₂O Masers

Braz, M.A., Epchtein, N. **111**, 91

On the nature of the (intermittent?) emission line star LkH₃24

Chavarría-K., C., Finkenzeller, U., Appenzeller, I., de Lara, E., Cardona, O. **118**, 189

Photometric membership in the very young open clusters NGC 457, NGC 7380, and IC 1805

Baade, D. **119**, 164; **51**, 235

Three-micron emission features in Herbig Be/Ae stars and related objects

Whittet, D.C.B., Williams, P.M., Bode, M.F., Davies, J.K., Zealey, W.J. **123**, 301

AB Aurigae and its variable hydrogen lines

Finkenzeller, U. **124**, 157

Spectroscopy and infrared photometry of southern T Tauri stars

Appenzeller, I., Jankovics, I., Krautter, J. **125**, 177; **53**, 291

The dust envelope of the Herbig Ae star, AB Aur

Catala, C. **125**, 313

The Herbig Ae star AB Aur: absorption along the line of sight and chromospheric emission

Felenbok, P., Praderie, F., Talavera, A. **128**, 74

Prominences, see Solar Prominences**Proper Motions**

Comparison between Proper Motions Obtained by the Rectilinear Trajectories of Optical Double Stars and Those Given by the SAO Catalogue

Debehogne, H., de Freitas Mourão, R.R. **71**, 55

Internal Motions in the Central Field of the Pleiades

Vasilevskis, S., van Leeuwen, F., Nicholson, W., Murray, C.A. **76**, 257; **37**, 333

A Proper Motion Membership Analysis of the Open Cluster NGC 7789

McNamara, B.J., Solomon, S. **97**, 415; **43**, 337

Optical Position and "Proper Motion" of the Radio Source OQ 208

Brosche, P., Geffert, M. **103**, 78

Photometric Parallaxes of Nearby Main-Sequence Stars with Annual Proper Motion of 0".7 or More Derived from Eggen's B, V and R, I Data

Gliese, W. **107**, 413; **47**, 471

A Pool of Faint Stars Applied to Star Catalogue Formation

Hering, R., Walter, H.G. **115**, 197

Membership in the open cluster NGC 6709

Hakkila, J., Sanders, W.L., Schröder, R. **119**, 326; **51**, 541

New optical positions and proper motions of late type stars associated with SiO masers

Soulié, G., Baudry, A. **121**, 331; **52**, 299

Membership of above horizontal branch stars in the globular cluster NGC 5466

Brosche, P., Geffert, M. **127**, 415

A proper motion membership analysis of the Orion Nebula region

McNamara, B., Huels, S. **128**, 260; **54**, 221

Protogalaxies

Rotation and Star Formation Rate in Protogalaxies

Di Fazio, A., Occhionero, F., Vagnetti, F. **72**, 204

Protoplanetary Cloud, see Cosmogony

Formation of Planetesimals in an Evolving Protoplanetary Disk

Coradini, A., Federico, C., Magni, G. **98**, 173

Mass Loss from the Protoplanetary Nebula

Horedt, G.P. **110**, 209

Special perturbations of rotating isothermal gas clouds with constant rotational velocity

Schmitz, F. **125**, 333

Continuing investigation of sweeping Jovian resonances. The 7:3 and 3:2 resonances with further discussion of the 2:1 resonance

Torbett, M.V., Smoluchowski, R. **127**, 345

Protostars, see also Star Formation, YY Orions Stars

A Comparison of Two Independent Calculations of the Axisymmetric Collapse of Rotating Protostar

Bodenheimer, P., Tscharnuter, W. **74**, 288

Are there Two Classes of T Tauri Stars?

Mundt, R., Bastian, U. **75**, L14

On the Disruption of a Protoplanetary Disk Nebula by a T Tauri Like Solar Wind

Elmegreen, B.G. **80**, 77

The Evolution of Protostellar Envelopes of Masses $3 M_{\odot}$ and $10 M_{\odot}$. I. Structure and Hydrodynamic Evolution

Yorke, H.W. **80**, 308

Three-dimensional Numerical Models of the Collapse of Turbulent Interstellar Clouds

Różyczka, M., Tscharnuter, W.M., Yorke, H.W. **81**, 347

Far Infrared Study of Molecular Clouds: Dust Temperature Profiles in S 140, IC 1396, RCrA

de Muizon, M., Rouan, D., Léna, P., Nicollier, C., Wijnbergen, J. **83**, 140

The Evolution of Protostellar Envelopes of Masses $3 M_{\odot}$ and $10 M_{\odot}$. II. Radiation Transfer and Spectral Appearance

Yorke, H.W. **85**, 215

Structure of Molecular Clouds. III. Effects of MHD Waves in Collapsing Fragments

Morfill, G.E., Stenholm, L.G. **90**, 134

Numerical Solution of the 1 D Spherical Non Stationary Radiating Shock Using Characteristics. Application to Protostars

Morel, P.J., Baglin, A. **90**, 327

Electron Scattering in the Infalling Envelope of the Protostar S CrA

Stahl, O., Wolf, B. **90**, 338

Population Inversion and Saturation Behaviour of Celestial Masers in Dusty Regions

Bettwieser, E. **93**, 8

The Spectral Appearance of Dusty Protostellar Envelopes

Yorke, H.W., Shustov, B.M. **98**, 125

Infrared speckle imaging: improvement of the method; results on Miras and protostars

Mariotti, J.M., Chelli, A., Foy, R., Léna, P., Sibille, F., Tchountonov, G. **120**, 237

T Tauri South: a protostar?

Bertout, C. **126**, L1

The physical structure of the globule B 335

Krögel, E., Stenholm, L.G., Steppe, H., Sherwood, W.A. **127**, 195

On radiative shocks in atomic and molecular stellar atmospheres.

I. Dominant physical phenomena

Gillet, D., Lafon, J.-P.J. **128**, 53

Pulsars, see also Crab Nebula, Neutron Stars

Gamma-ray Spectra Expected from Pulsars

Massaro, E., Salvati, M. **71**, 51

Intrinsic Position Angles of Polarization for 40 Pulsars

Morris, D., Graham, D.A., Seiradakis, J.H., Sieber, W., Thomasson, P., Jones, B.B. **73**, 46

The Rotational History of a Binary X-ray Pulsar

Wang, Y.-M. **74**, 253

Cerenkov Radiation of a Charged Particle Moving in a Magnetized, Cold Plasma (Pulsar Magnetosphere)

Heintzmann, H., Nitsch, J. **74**, 263

Neutral Hydrogen Absorption in the Spectra of Four Low-latitude Pulsars

Weisberg, J.M., Boriakoff, V., Rankin, J. **77**, 204

Cyclotron Line Formation by Resonant Compton-cyclotron Scattering in Hercules-X1

Bonazzola, S., Heyvaerts, J., Puget, J.L. **78**, 53

Geometry of Pulsar Emission and Pulse-width Statistics

Proszynski, M. **79**, 8

A Search for Low Energy Gamma Rays from CG 195+4

Haymes, R.C., Meegan, C.A., Fischman, G.J. **79**, 88

The Interpulse Emission Structure in Pulsars

Bruck, Yu.M., Ustimenko, B.Yu. **80**, 170

Pulsed High Energy Gamma Rays from Vela Pulsar

Bhat, P.N., Gupta, S.K., Ramana Murthy, P.V., Sreekantan, B.V., Tonwar, S.C., Viswanath, P.R. **81**, L3

Coherent Curvature Radiation

Kirk, J.G. **82**, 262

Do all Binary X-ray Pulsars Spin-up by Accretion from a Keplerian Disc?

Savonije, G.J. **83**, 375

Changes in the Average Pulse Shape of PSR 0355+54 at 11 cm Wavelength

Morris, D., Sieber, W., Ferguson, D.C., Bartel, N. **84**, 260

A 21-cm Search for Periodicities in Objects of Special Interest

Seiradakis, J.H., Graham, D.A. **85**, 353

A Correlation of the P_3 Periods of Pulsars With Their Magnetic Fields and Ages

Wolszczan, A. **86**, 7

About the Flux Density Distribution, The Galactic Distribution and the Birthrate of Pulsars

Arnaud, M., Rothenflug, R. **87**, 196

The Millisecond Intensity Variation in the Emission of Radio Pulsars

Bartel, N., Sieber, W., Graham, D.A. **87**, 282

H I Absorption Measurements of Seven Low-latitude Pulsars

Weisberg, J.M., Rankin, J., Boriakoff, V. **88**, 84

New Upper Limits for Pulsed Soft X-rays from the Vela Pulsar PSR 0833-45

Zimmermann, H.U. **88**, 309

Intensity and Spectrum of the Continuum Gamma Ray Emission from Supernovae

Cavallo, G., Pacini, F. **88**, 367

Spectra and Pulse Formation Mechanism in X-ray Pulsars: Application to Her X-1

Yahel, R.Z. **90**, 26

Pulse to Pulse Intensity Modulation from Radio Pulsars with Particular Reference to Frequency Dependence

Bartel, N., Sieber, W., Wolszczan, A. **90**, 58

Detailed Characteristics of the High-energy Gamma Radiation from PSR 0833-45 Measured by COS-B

Kanbach, G., Bennett, K., Bignami, G.F., Buccheri, R., Caraveo, P., D'Amico, N., Hermesen, W., Lichti, G.G., Masnou, J.L., Mayer-Hasselwander, H.H. **90**, 163

- Stability of Strong Linearly Polarized Electromagnetic Waves in Dense Plasmas
Che, A., Kegel, W.H. **92**, 204
- Unusual Properties of the Pulsar PSR 1822-09
Fowler, L.A., Wright, G.A.E., Morris, D. **93**, 54
- Simultaneous Two-station Single Pulse Observations of Radio Pulsars Over a Broad Frequency Range. I. With Particular Reference to PSR 0809 + 74
Bartel, N., Kardashev, N.S., Kuzmin, A.D., Ya. Nikolaev, N., Popov, M.V., Sieber, W., Smirnova, T.V., Soglasnov, V.A., Wielebinski, R. **93**, 85
- Plasma Infall and X-ray Production in the Magnetic Funnel of an Accreting Neutron Star
Wang, Y.-M., Frank, J. **93**, 255
- Discovery of Mode Switching in PSR 1926-18
Ferguson, D.C., Boriakoff, V., Weisberg, J.M., Backus, P.R., Cordes, J.M. **94**, L6
- Pulsar Statistics and Their Interpretations
Arnett, W.D., Lerche, I. **95**, 308
- Expected Characteristics of Pulsar Gamma-ray Radiation and the Problem of its Location
Heyvaerts, J., Signore, M. **96**, 36
- Spectral and Angular Distribution of Synchro-compton Radiation in a Linearly Polarized Vacuum Wave of Arbitrary Intensity
Leubner, C. **96**, 373
- Evidence for Ultra Broad Band Absorption of Radio Emission in the Pulsar Magnetosphere
Bartel, N. **97**, 384
- Do Neutron Star Magnetic Fields Decay
Kundt, W. **98**, 207
- Optical Timing Observations of the Crab Pulsar 1969-1979
Lohsen, E.H.G. **99**, 202; **44**, 1
- Frequency Dependence of the P_2 and P_3 Periods in Four Pulsars
Wolszczan, A., Bartel, N., Sieber, W. **100**, 91
- Self-consistent Solutions for Electromagnetic Plane Waves in a Relativistic Plasma
Che, A., Herold, H., Reinecke, M., Ruder, H., Wunner, G. **100**, 164
- Simultaneous Five Colour Photometry of the Double Period Optical Pulsar H 2254-033
Motch, C., Pakull, M.W. **101**, L9
- Erratum: Intensity and Spectrum of the Continuum Gamma Ray Emission from Supernovae
Cavallo, C., Pacini, F. **101**, 159
- Statistics of Neutral Hydrogen Absorption Toward Pulsars
Dickey, J.M., Weisberg, J.M., Rankin, J.M., Boriakoff, V. **101**, 332
- Mode-changing and Quantized Subpulse Drift-rates in Pulsar PSR 2319 + 60
Wright, G.A.E., Fowler, L.A. **101**, 356
- Spin-reversed Accretion as the Cause of Intermittent Spindown in Slow X-ray Pulsars
Wang, Y.-M. **102**, 36
- An Analysis of the Pulse Profiles of the Binary X-ray Pulsars
Wang, Y.-M., Welter, G.L. **102**, 97
- A Method for Searching for Optical Pulsars
Elsworth, Y.P., James, J.F. **103**, 131
- Pulsar Altitude Distribution as a Clue to Their Mean Velocity and Lifetime
Arnaud, M., Rothenflug, R. **103**, 263
- The Stability of the Pulse Intensity of the X-ray Pulsar in the Crab Nebula
Meidav, M., Sadeh, D. **103**, 367
- The Frequency Dependence of Micropulse Separation
Gil, J. **104**, 69
- A New Analysis of the Pulsar Distribution in the Galaxy
Morini, M. **104**, 75
- On the Distribution of Pulsars in the Galactic Plane
del Romero, A., Gómez-González, J. **104**, 83
- Observations of the Polarization of Average Pulsar Profiles at High Frequency
Morris, D., Graham, D.A., Sieber, W., Bartel, N., Thomasson, P. **106**, 180; **46**, 421
- Neutrino Cyclotron Radiation from Superfluid Vortexes in Neutron Stars: A New Mechanism for Pulsar Spin Down
Qiu-He Peng, Ke-Liang Huang, Jie-Hao Huang **107**, 258
- Some Constraints on the Evolutionary History of the Binary Pulsar PSR 1913 + 16
Srinivasan, G., van den Heuvel, E.P.J. **108**, 143
- Pulse-interpulse Interaction in Pulsar PSR 1822-09
Fowler, L.A., Wright, G.A.E. **109**, 279
- PSR 1133 + 16: Determination of the Dispersion Measure and the Locations of the Emitting Regions
Kardashev, N.S., Nikolaev, N.Ya., Novikov, A.Yu., Popov, M.V., Soglasnov, V.A., Kuzmin, A.D., Smirnova, T.V., Bartel, N., Sieber, W., Wielebinski, R. **109**, 340
- The Anomalous Braking Index of the Crab Pulsar: A Plasma Inertial Effect
Heintzmann, H., Schröfer, E. **111**, L4
- On the Self-consistent Solutions of Pulsar Plasma Waves
Chian, A.C.-L. **112**, 391
- Geometry of Pulsar Beams: Relative Orientations of Rotation Axis, Magnetic Axis and Line of Sight
Narayan, R., Vivekanand, M. **113**, L3
- Thermal X-ray Emission from Isolated Older Pulsars: A New Heating Mechanism
Huang, J.-H., Lingenfelter, R.E., Peng, Q.-H., Huang, K.-L. **113**, 9
- A Search for Pulsar Haloes at 843 MHz
Kesteven, M.J., Durdin, J.M. **113**, 211
- Causal Relationship Between Pulsar Long-term Intensity Variations and the Interstellar Medium
Sieber, W. **113**, 311
- A Distinct Shell Structure in H1-line Emission at Intermediate Galactic Latitudes
Velden, L., Hirth, W. **113**, 340
- The Angular Beaming Model of Microstructure and the Subpulse Drifting Phenomenon
Gil, J. **115**, 270
- A Multi-frequency Fluctuation Spectrum Analysis of the Pulse to Pulse Intensity Variations in Nine Pulsars
Nowakowski, L., Usowicz, J., Wolszczan, A., Kepa, A. **116**, 158
- A low energy gamma ray observation of the region containing CG 195 + 4
Baker, R.E., Butler, R.C., Dean, A.J., Hayles, R.I., Ramsden, D., Di Cocco, G., Boella, G., Della Ventura, A., Perotti, F., Villa, G. **117**, 38
- Pulsar statistics and two types of pulsars
Huang, J.-H., Huang, K.-L., Peng, Q.-H. **117**, 205
- Determination of the time scale of the magnetic moment decay in pulsars
Nowakowski, L.A. **118**, 29
- Relativistic coherent curvature radiation
Benford, G., Buschauer, R. **118**, 358

- A search for very high energy gamma-ray transients from Cygnus X-3 and PSR 0531
Weekes, T.C. **121**, 232
- Evidence for evolving elongated pulsar beams
Narayan, R., Vivekanand, M. **122**, 45
- Possible supernova remnant associated with pulsar PSR 1930+22
Gómez-González, J., del Romero, A. **123**, L5
- Lorentz factor of particles emitting in pulsars
Gil, J. **123**, 7
- BG 1937+21: an extended radio source towards the millisecond Pulsar PSR 1937+21
Mantovani, F., Panagia, N., Tomasi, P. **123**, 347
- Do filaments form at the time of Supernova explosions?
Bandiera, R., Pacini, F., Salvati, M. **126**, 7
- Role of magnetic fields during the stellar collapse and origin of binary pulsars
Pacini, F. **126**, L11
- Detection of magnetomultipole radiation from neutron stars
Lipunov, V.M. **127**, L1
- Searches for gamma ray emission from radio pulsars
Thompson, D.J., Bertsch, D.L., Hartman, R.C., Hunter, S.D. **127**, 220
- Evolution of pulsar magnetic field axis orientation
Nowakowski, L.A. **127**, 259
- PSR 0950+08: a model for interpulse emission
Gil, J. **127**, 267
- Stellar collapse, pulsars, and globular clusters
Katz, J.I. **128**, L1
- Search for pulsed γ -ray emission from radio pulsars in the COS-B data
Buccheri, R., Bennett, K., Bignami, G.F., Bloemen, J.B.G.M., Boriakoff, V., Caraveo, P.A., Hermesen, W., Kanbach, G., Manchester, R.N., Masnou, J.L., Mayer-Hasselwander, H.A., Özel, M.E., Paul, J.A., Sacco, B., Scarsi, L., Strong, A.W. **128**, 245
- Pulsations**, see also Oscillations
- Observational Evidence for the Pulsational Stability of Some Ap Stars
Weiss, W.W. **71**, 271; **35**, 83
- An Attempt to Detect Non-radial Pulsation in β Cephei
Schafgans, J.J., Tinbergen, J. **72**, 378; **35**, 279
- Solar Pulsations and Angular Coherence of Atmospheric Transparency Fluctuations
Grec, G., Fossat, E., Brandt, P., Deubner, F.L. **77**, 347
- Photometric Variability on the Lower Part of the Cepheid Instability Strip I: Evolved Am Stars
Garrido, R., Lopez de Coca, P., Quintana, J.M., Rolland, A., Saez, M. **83**, 114
- On Local Theories of Time-dependent Convection in the Stellar Pulsation Problem
Gonczy, G., Osaki, Y. **84**, 304
- Two-zone Models for Multimode Cepheid Variables II. Comparison with Models for Classical Cepheids with Complicated Envelope Hydrogen Profiles
Olsen Petersen, J. **84**, 356
- On Local Theories of Time Dependent Convection in the Stellar Pulsation Problem. II. The Effect of Turbulent Viscosity
Gonczy, G. **96**, 138
- V 553 Centauri and a Progression of Bumps in BL Herculis Light Curves
Petersen, J.O. **96**, 146
- The Potentials for the g -, p -, and the Toroidal-modes of Self-gravitating Fluids
Sobouti, Y. **100**, 319
- A 928 MHz Search for Periodicities in 2CG 195+04
Seiradakis, J.H. **101**, 158
- On the Existence of Hysteresis Effects in Pulsating Stars
Auvergne, M., Baglin, A., Morel, P.-J. **104**, 47
- An Usually Short Stable Period of Absorption Line Asymmetries and V/R Variations in the Spectrum of the Be Star 28 CMa
Baade, D. **105**, 65
- The Pulsation of the Outer Layers of the Beta Cephei-type Variable BW Vul
Burger, M., de Jager, C., van den Oord, G.H.J., Sato, N. **107**, 320
- The Pulsation of the Outer Layers of the Beta Cephei Star σ Sco
Burger, M., de Jager, C., van den Oord, G.H.J. **109**, 289
- On Local Theories of Time-dependent Convection in the Stellar Pulsation Problem. III. The Effect of Turbulent Viscosity (Continued)
Gonczy, G. **110**, 1
- Fast Coherent Oscillations in Variable X-ray Sources and Bursters
Livio, M., Bath, G.T. **116**, 286
- Resonance effects in radial pulsators
Buchler, J.R. **118**, 163
- The double-mode Cepheid CO Aur
Mantegazza, L. **118**, 321
- An observational study of the influence of close companions on the pulsations of β Cephei stars
Waelkens, C., Rufener, F. **121**, 45
- The temperature of the pulsating DB white dwarf GD 358
Koester, D., Weidemann, V., Vauclair, G. **123**, L11
- A search for rapid spectroscopic variability in the early-type supergiants γ and θ Ara
Baade, D. **124**, 211
- Special perturbations of rotating isothermal gas clouds with constant rotational velocity
Schmitz, F. **125**, 333
- Study of the variability of the Delta Scuti stars. VI. Pulsational behaviour of HR 1392 (69 Tau)
Bossi, M., Guerrero, G., Mantegazza, L., Scardia, M. **126**, 222; **53**, 395
- Study of the variability of the Delta Scuti stars. VII. The problem of stability and monop periodicity in 20 CVn
Bossi, M., Guerrero, G., Mantegazza, L., Scardia, M. **126**, 222; **53**, 399
- Fine time structure in the 1979 March 5 gamma ray burst
Barat, C., Hayles, R.I., Hurley, K., Niel, M., Vedrenne, G., Desai, U., Estulin, I.V., Kurt, V.G., Zenchenko, V.M. **126**, 400
- The group of low-harmonic pulsating CP2 stars: HD 10088, a new candidate
Weiss, W.W. **128**, 152
- Quarks**
- Quark Core in Neutron Stars. I
Alvarez, E. **84**, 7
- Quark Core in Neutron Stars. II
Alvarez, E., Ibáñez, J.M. **98**, 390
- Quasi-stellar Objects**
- The Results of Limitations on the X-ray Source Size on Gamma Radiation from 3C 273
McBreen, B. **71**, L19

Radio Structures of B 2 Quasars at 1415 MHz

Fanti, R., Feretti, L., Giovannini, G., Padrielli, L. **71**, 272; **35**, 169

Estimates of the Depolarization Parameter and Ionized Hydrogen Mass of 3 C Quasars

Cohen, N.L. **71**, 362

Properties of the Galaxy and the Nucleus of the Radiosource 3 C 120

Wlérick, G., Westerlund, B., Garnier, R. **72**, 277

Formation of Permitted Lines in the Spectrum of Type I Seyfert Galaxies and Quasars Fe II Lines, Preliminary Discussion

Collin-Souffrin, S., Joly, M., Heidmann, N., Dumont, S. **72**, 293

A Study of the Optical Variability of the Quasistellar Objects in the 13^h+36° Field. I: The Blue Magnitudes

Bònoli, F., Braccesi, A., Federici, L., Zitelli, V., Formiggini, L. **72**, 380; **35**, 391

Line Profiles in Expanding Envelopes

Surdej, J. **73**, 1

Radio Spectral Properties of B 2 Quasars

Fanti, R., Feretti, L., Giovannini, G., Padrielli, L. **73**, 40

Optically Variable Quasars and Bright Galaxies

Nieto, J.L. **74**, 152

Quasar Number Counts and the X-ray Background

Setti, G., Woltjer, L. **76**, L1

Very High Resolution Observations of the Nearby Quasar 0241+622

Geldzahler, B.J., Shaffer, D.B. **76**, L21

The Two-point Angular Correlation Function between Quasars and Rich Clusters of Galaxies

Roberts, D.H., O'Dell, S.L. **76**, 254

Morphology of Low-redshift Quasars and Related Objects. First Results Obtained by Electronography

Vanderriest, Ch., Schneider, J. **76**, 297

Survey of the Optical Variability of Compact Extragalactic Objects. III. Objects from 23^h to 11^h

Barbieri, C., Romano, G., Zambon, M. **76**, 370; **37**, 551

A Westerbork 1415 MHz Survey of Radio Sources. V. Spectrophotometric Observations of a Sample of the Stellar Identifications

Arp, H.C., De Ruiter, H.R., Willis, A.G. **77**, 86

Selection Effect in Absorption Line Redshifts of QSOs

Basu, D. **77**, 255

A Search for Radio Recombination Lines from Galaxies and Quasars

Churchwell, E., Shaver, P.A. **77**, 316

Quasars and Cosmology

Fliche, H.H., Souriau, J.M. **78**, 87

The Surface Density of QSOs

Steppe, H., Véron, P., Véron, M.P. **78**, 125

Do They Observe Objects with Large Violet Shifts?

Putsil'nik, S.A. **78**, 248

Effect of Hard X-ray on the Emission Lines of Seyfert Galaxies and QSOs

Shields, G.A., Mushotzky, R.F. **79**, 56

Physical Conditions in the Narrow Line Region in Active Galaxies and Quasars

Heckman, T.M., Balick, B. **79**, 350

A Search for Extended Radio Emission around the Nearby X-ray QSO 0241+622

Miley, G., Margon, B. **79**, 360

Spectral Index Dependent Properties of Steep Spectrum Radio

Blumenthal, G., Miley, G. **80**, 13

Quark Era in the Primeval Universe

Alvarez, E., Hakim, R. **80**, 71

Ionization Equilibrium, Thermal Equilibrium, and Radiative Acceleration near Strong Radiation Sources with Different Spectral Shapes

Röser, H. **80**, 179

Supercritical Disc Accretion on to Black Holes: Quasars and Type I Seyferts

Jones, B.C., Raine, D.J. **81**, 128

A Search for Faint Blue Stars in High Galactic Latitudes. II. Fourteen PSS Fields at Declinations +6° and 0° near the South Galactic Pole

Berger, J., Fringant, A.-M. **81**, 388; **39**, 39

Non-parametric Elimination of the Observational Magnitude Cutoff Bias

Nicoll, J.F., Segal, I.E. **82**, L3

Radiatively Driven Winds from Extended Sources

Beltrametti, M., Perry, J.J. **82**, 99

A Sample of Very Faint Ultraviolet Excess Objects in the 13^h+36° Field. I. The Data

Formiggini, L., Zitelli, V., Bònoli, F., Braccesi, A. **82**, 393; **39**, 129

Formation of Permitted Lines in the Spectrum of Type I Seyfert Galaxies and Quasars. II. Fe II Lines and the Low Excitation Region

Collin-Souffrin, S., Dumont, S., Heidmann, N., Joly, M. **83**, 190

Morphologie des quasars de faibles décalages spectraux et objets apparentes. II. 8 Sequences photoélectriques UBV

Vanderriest, Ch., Herpe, G. **83**, 384; **39**, 395

X-ray Background and Discrete, Evolving Sources

Cavaliere, A., Danese, L., De Zotti, G., Franceschini, A. **85**, L9

An Extreme Fe II Emitter: the Narrow Line Quasar PHL 1092

Bergeron, J., Kunth, D. **85**, L11

A Sample of Very Faint Ultraviolet Excess Objects in the 13^h+36° Field. II. A Discussion of the Number-magnitude Relation of Optically Selected Quasars and a New Determination...

Braccesi, A., Zitelli, V., Bònoli, F., Formiggini, L. **85**, 80

Precise Optical Positions of Radio Sources in the Southern Hemisphere

Walter, H.G., West, R.M. **86**, 1

Radiatively Driven Winds for Different Power Law Spectra

Beltrametti, M. **86**, 169

Linear Polarization Measurements of Extragalactic Radio Sources at $\lambda\lambda$ 17.4 and 18.9 cm

Simard-Normandin, M., Kronberg, P.P., Neidhöfer, J. **86**, 268; **40**, 319

Time-dependent Radio Fine Structure of the Compact Sources NRAO 150 and 4 C 39.25

Baath, L.B., Cotton, W.D., Counselman, C.C., Shapiro, I.I., Wittels, J.J., Hinteregger, H.F., Knight, C.A., Rogers, A.E.E., Whitney, A.R., Clark, T.A. **86**, 364

Observations at 408-MHz of Sources in the $\pm 4^\circ$ Declination Strip of the Parkes 2700-MHz Survey

Grueff, G., Maccacaro, T., Wall, J.V. **87**, 252; **41**, 21

Radio Observations of Optically Selected Quasars

Strittmatter, P.A., Hill, P., Pauliny-Toth, I.I.K., Steppe, H., Witzel, A. **88**, L12

The Broad Line Region in Active Nuclei and Quasars: Correlations with Luminosity and Radio Emission

Heckman, T.M. **88**, 311

- An Analysis of the Cosmological Evolution of Radio Sources. I. Spectral-index Dependent Counts of Sources and Spectral Index Distributions at 1400 MHz
Machalski, J. **89**, 251; **41**, 323
- Quasars, Isotropy of H_{α} and the Local Supercluster of Galaxies
Reboul, H.J. **89**, 272
- VLA Observations of the Absorption-line Quasars PHL 938 and PHL 5200
Gopal-Krishna, Sramek, R.A. **90**, L1
- On the Nature of the Faint (B 20) Ultraviolet Excess Objects and the Problem of the X-ray Background
Bönoli, F., Braccetti, A., Marano, B., Merighi, R., Zitelli, V. **90**, L10
- HR 976 and 4 C 34.13: An X-ray Odd Couple
Cash, W., Snow, T.P., Jr. **91**, L7
- Circular Polarization as a Probe of Radio Sources (High Accuracy Polarization Measurements at λ 49 cm)
Weiler, K.W., de Pater, I. **91**, 41
- Alfvén-driven Cyclotron Corona as a Model for Quasar Infrared
Zurek, W.H. **91**, 90
- High Dynamic Range Observations in the Fields of Strong Extragalactic Radio Sources
Stute, U., Reich, W., Kalberla, P.M.W. **92**, 323; **42**, 299
- 3C 273 Revisited: Confirmation by COS-B of High Energy Gamma-ray Emission
Bignami, G.F., Bennett, K., Buccheri, R., Caraveo, P.A., Hermesen, W., Kanbach, G., Licht, G.G., Masnou, J.L., Mayer-Haselswander, H.A., Paul, J.A. **93**, 71
- Precise Optical Positions of Southern Radio Sources
Wroblewski, H., Costa, E., Torres, C. **93**, 245
- Clustering of Blue Objects
Erculiani Abati, L. **93**, 282
- The Correlation Between the Absolute Magnitudes of Quasi-stellar Objects and the Velocities of Ejected Gas: A Consequence of Observational Selection
Peterson, B.M. **93**, 382
- High-energy X-ray Observations of Extragalactic Objects
Pietsch, W., Reppin, C., Trümper, J., Voges, W., Lewin, W., Kendziorra, E., Staubert, R. **94**, 234
- Superclusters and Lyman α Absorption Lines in Quasars
Oort, J.H. **94**, 359
- Evidence for the Location of Quasars in Superclusters
Oort, J.H., Arp, H., de Ruiter, H. **95**, 7
- Linear Polarization Observations of Extragalactic Radio Sources at λ 2 cm and at 17-19 cm
Simard-Normandin, M., Kronberg, P.P., Neidhöfer, J. **95**, 208; **43**, 19
- A 4850 MHz Survey of the 5 C 6 Area
Maslowski, J., Pauliny-Toth, I.I.K., Witzel, A., Kühr, H. **95**, 285
- Decelerated Flows of Matter around the Quasars PHL 5200 and RS 23
Surdej, J., Swings, J.P. **96**, 242
- VLBI Observations of the Quasar DA 193
Schilizzi, R.T., Shaver, P.A. **96**, 365
- An H I Synthesis Study of the Galaxy/QSO Pair NGC 6503/1749+70.1
Shostak, G.S., Willis, A.G., Crane, P.C. **96**, 393
- Linear Polarization Measurements at λ 11 cm
Parma, P., Weiler, K.W. **96**, 412
- Supermassive Black Holes and Emission Lines of Active Galaxies and QSOs: Accretion Rate, Black Hole Mass, and Photoionization Models
Aldrovandi, S.M.V. **97**, 122
- Search for Low Frequency Variability in a Complete Sample of Extragalactic Radiosources
Fanti, C., Ficarra, A., Gregorini, L., Mantovani, F., Olori, M.C. **97**, 251
- Constraints to the QSO Contribution to the X-ray Background
Cavaliere, A., Danese, L., de Zotti, G., Franceschini, A. **97**, 269
- Westerbork Observations of Radio Sources in the 5 GHz 'S4' Survey
Kapahi, V.K. **97**, 416; **43**, 381
- A Study of Galactic Absorption as Revealed by the Reddenings of Quasars
Teerikorpi, P. **98**, 300
- On the Hubble Diagram for Quasars as Corrected for Galactic Absorption: Evidence for a Separate Class of the Most Luminous Quasars
Teerikorpi, P. **98**, 309
- Light Curves for Two Optically Variable Quasars
Kinnander, A. **99**, 63
- O III: Intercombination and Forbidden Lines
Nussbaumer, H., Storey, P.J. **99**, 177
- Survey of the Optical Variability of Compact Extragalactic Objects. IV. Objects from 12^h to 16^h
Barbieri, C., Romano, G. **99**, 206; **44**, 159
- Further Evidence for the Strong Steepening of the Median Radio Spectrum with Decreasing Intensity of Sources Selected at 5 GHz
Machalski, J., Ryś, S. **99**, 388
- A Spectroscopic Survey of Emission-line Objects in Two Fields
Kunth, D., Sargent, W.L.W., Kowal, C. **99**, 403; **44**, 229
- UV Observations of the New BL Lac Object 0716+71
Fricke, K.J., Kollatschny, W., Schleicher, H. **100**, 1
- Spectrophotometry of Paschen and Balmer Lines in PKS 0312-77 and 3C 109
Kollatschny, W., Fricke, K.J. **100**, L4
- An Improved Optical Position of 3C 273B in the FK4-system
de Vegt, Chr., Gehlich, U.K. **101**, 191
- Extragalactic Radio Sources with very Steep Decimetre-wave Spectrum
Gopal-Krishna, Steppe, H. **101**, 315
- Low Frequency Variable Sources 5 Year Monitoring Program at 408 MHz
Fanti, C., Fanti, R., Ficarra, A., Mantovani, F., Padrielli, L., Weiler, K.W. **101**, 418; **45**, 61
- Formation and Transfer of Permitted Si II Emission Lines in Seyfert I Galaxies and Quasars
Dumont, A.M., Mathez, G. **102**, 1
- Morphology and Photometry of the Nebulosity Associated with 3C 120
Wlrick, G., Bouchet, P., Cayatte, V., Michel, D. **102**, L17
- The Fe II Spectrum of Seyfert I Galaxies and Quasars
Joly, M. **102**, 321
- On the Observability of Gravitational Scintillation
Hameury, J.M., Perault, M., Bonazzola, S., Puget, J.L. **103**, 63
- Importance of the Doppler Differential Effect in the Interpretation of Active Nuclei Spectra. I. The Hydrogen Spectrum
Gordon, C., Collin-Souffrin, S., Dultzin-Hacyan, D. **103**, 69
- Further Spectroscopic Observations of 25 Quasi-stellar Objects
Surdej, J., Swings, J.P. **104**, 171; **46**, 305

- Hydrogen Line Spectrum in Quasars. I. Approximation Procedures for Line Transfer Versus an Exact Treatment
Collin-Souffrin, S., Delache, P., Dumont, S., Frisch, H. **104**, 264
- Cepstral Analysis of Interfering Delay Signals as Applied to Detection of Gravitational Lenses
Afraimovich, E.L. **105**, L5
- QSO Counts: a Complete Survey of Stellar Objects to $B=23$
Koo, D.C., Kron, R.G. **105**, 107
- Quasar-generating Superclusters: An Explanation for a Clumpy Quasar Sky?
de Ruiter, H.R., Zuiderwijk, E.J. **105**, 254
- Radio Observations of the Giant Quasar 4C 34.47
Jägers, W., van Breugel, W., Miley, G.K., Schilizzi, R.T., Conway, R.G. **105**, 278
- The Properties of AP Librae from *UBV* Photoelectric Photometry
Westerlund, B.E., Wlêrick, G., Garnier, R. **105**, 284
- The Photometric History of the BL Lacertae Object OJ 287
Gaida, G., Röser, H.-J. **105**, 362
- On the Quasar Surface Density
Véron, P., Véron-Cetty, M.P. **105**, 405
- Possible Measurement of the Time Delay Between Gravitational Images of Expanding Double Radio-sources
Vanderriest, C. **106**, L1
- On Symmetric Structure in Compact Radio Sources
Phillips, R.B., Mutel, R.L. **106**, 21
- An Assessment of the Detectability of X-ray Emission from Winds in Active Galactic Nuclei and Quasars
Beltrametti, M., Drew, J. **106**, 153
- Profiles of [O III] Lines in QSOs
Miley, G.K., Heckman, T.M. **106**, 163
- Compact and Extended Structure in B2 Radio Sources of Intermediate Strength
Padrielli, L., Kapahi, V.K., Katgert-Merkelijn, J.K. **106**, 181; **46**, 473
- The Periodicity in the Distribution of Quasar Redshifts and the Density Perturbations in the Early Universe
Fang, L.-Z., Chu, Y.-Q., Cao, Ch. **106**, 287
- Hydrogen Line Spectrum in Quasars. II. A Critical Discussion of Model Calculations for the Broad Line Region
Collin-Souffrin, S., Dumont, S., Tully, J. **106**, 362
- New Study on Quasars and Isotropy of H_0
Reboul, H.J. **108**, 85
- VLBI Observations of 12 Compact Radio Sources North of Declination 70°
Eckart, A., Hill, P., Johnston, K.J., Pauliny-Toth, I.I.K., Spencer, J.H., Witzel, A. **108**, 157
- A Possible Large-scale Anisotropy of the Universe
Fliche, H.H., Souriau, J.M., Triay, R. **108**, 256
- Integrated Linear Polarization of Extragalactic Radio Sources at 10.5 GHz (λ 2.86 cm). II
Simard-Normandin, M., Kronberg, P.P., Button, S. **108**, 416; **48**, 137
- Historical Light Variations in Quasars Measured in Turku
Takalo, L.O. **109**, 4
- Quasars in a Control Field Far from Bright Galaxies
Arp, H., Surdej, J. **109**, 101
- Non-thermal Emission from Relativistic Accretion Disks: A Simple Model for Axisymmetric Inhomogeneous Sources
Pineault, S. **109**, 294
- Extended H I-envelopes Around Spiral Galaxies: NGC 2655 and NGC 2715
Huchtmeier, W.K., Richter, O.-G. **109**, 331
- Photometry of 0957+561; Detection of Short Period Variations (in French)
Vanderriest, C., Bijaoui, A., Fêlenbok, P., Lelièvre, G., Schneider, J., Wlêrick, G. **110**, L11
- The Physical Nature of the Blue Objects in the Field of 88 Leonis
Erculiani Abati, L. **110**, 180; **48**, 333
- Spectral Index Behaviour of Low Frequency Variable Radio Sources
Mantovani, F. **110**, 345
- IUE Observations of Quasars 3C249.1 and 3C232
Dultzin-Hacyan, D., Salas, L., Daltabuit, E. **111**, 43
- Nonlinear Shear Instabilities in an Infinite Slab
Nepveu, M. **112**, 223
- Further Investigations on Possible Correlations Between QSOs and the Lick Catalogue of Galaxies
Nieto, J.-L., Seldner, M. **112**, 321
- Spectral Index - Flux Density Relation for Extragalactic Radio Sources Found in Metre-wavelength Surveys
Gopal-Krishna, Steppe, H. **113**, 150
- The Cosmic Density Wave and Its Observable Vestige
Liu, Y.-Z. **113**, 192
- Precise Optical Positions of Radio Sources in the FK 4-system. II. Results from 28 Sources on the Northern Hemisphere and a Preliminary Comparison of the Optical-Radio Reference Frame
de Vegt, C., Gehlich, U.K. **113**, 213
- Statistical Correction of Projection of Radio-sources on the Sky and Application to the Apparent Size-Redshift and Linear Size-Line Width Relation
Nottale, L. **113**, 223
- Structure of Dynamics of Supersonic Jets
Norman, M.L., Smarr, L., Winkler, K.-H. A., Smith, M.D. **113**, 285
- On the Behaviour of QSO Space Density Beyond $z = 3.5$
Mathez, G., Nottale, L. **113**, 336
- A Rapid Outburst of BL Lac at 2.72 GHz
Reich, W., Steffen, P. **113**, 348
- Evolutionary Luminosity Functions of Extragalactic Sources Driven by Gravitational Power
Cavaliere, A., Giallongo, E., Messina, A., Vagnetti, F. **114**, L1
- Escape Probabilities, Mean Number of Scatterings and Net Radiative Bracket for Resonance Lines
Frisch, H. **114**, 119
- On the Interpretation of Optically Thin Synchrotron Spectra
Pineault, S. **114**, 177
- Spectroscopic Observations of Thirteen Optically-selected QSOs in a Large Field Centred Around NGC 5334
Surdej, J., Swings, J.P., Arp, H., Barbier, R. **114**, 182
- The Influence of Buoyancy on the Stability of Jets
Achterberg, A. **114**, 233
- Local Coupling of Surface MHD Waves with Kinetic Alfvén Waves in Jets
Bodo, G., Ferrari, A. **114**, 394
- The Precision on the Measure of q_0 Using the Gravitational Lensing Effect
Lacroix, G., Schneider, J. **115**, 54
- Asymmetric Emission-line Regions with Out-flowing Mass in QSOs and the $Z_{ab} > Z_{em}$ Systems
Goldman, I., Bahcall, J.N. **115**, 242
- The Quasar B2 1320+29
Feretti, L., Giovannini, G., Parma, P. **115**, 423
- The Connection of a Catalogue of Stars with an Extragalactic Reference Frame
Froeschlé, M., Kovalevsky, J. **116**, 89

Rapid variability in 3C 273 at 1 mm

Sherwood, W.A., Kreysa, E., Gemünd, H.-P., Biermann, P. **117**, L5

Optical spectroscopy of flat spectrum radio sources

Fricke, K.J., Kollatschny, W., Witzel, A. **117**, 60

Can all quasars be gravitationally lensed Seyfert's nuclei?

Setti, G., Zamorani, G. **118**, L1

The contribution of quasi-stellar objects to the cosmic X-ray background

Narlikar, J.V., Burbidge, G. **118**, 154

The low frequency variability of extragalactic radio sources: discussion of the properties

Fanti, C., Fanti, R., Ficarra, A., Gregorini, L., Mantovani, F., Padrielli, L. **118**, 171

Optical counterparts of radio sources from 5 GHz surveys: identification between RA = 4 h and RA = 14 h

Meisenheimer, K., Röser, H.-J. **118**, 208; **51**, 41

Flux density measurements of bright extragalactic sources at 36.8 GHz

Salonen, E., Lehto, H., Urpo, S., Teerikorpi, P., Teräsanta, H., Haarala, S., Valtaoja, E., Tähtinen, L., Sillanpää, A., Tiuri, M., Valtonen, M. **118**, 208; **51**, 47

Erratum: The precision on the measure of q_0 using the gravitational lensing effect

Lacroix, G., Schneider, J. **118**, 368

The composite UV emission spectrum of Seyfert I galaxies

Véron-Cetty, M.-P., Véron, P., Tarenghi, M. **119**, 69

Precise optical positions for radio/optical astrometric sources in the southern hemisphere

Costa, E., Torres, C., Wroblewski, H. **119**, 324; **51**, 425

Variability at 5 GHz in low luminosity radio nuclei of galaxies and quasars

Ekers, R.D., Fanti, R., Miley, G.K. **120**, 297

The variability of the optical counterparts of four extragalactic radio sources

Miller, H.R. **121**, 331; **52**, 289

Measurement of unambiguous rotation measures of extragalactic sources

Rudnick, L., Zukowski, E., Kronberg, P.P. **121**, 332; **52**, 317

Hydrogen line ratios of low redshift QSO's

Kollatschny, W., Fricke, K.J. **122**, 33

Observations of the MG II λ 2800 spectral region in broad absorption line quasars

Wampler, E.J. **122**, 54

Radio recombination lines and the distance to quasars

Sarazin, C.L., Wadiak, E.J. **123**, L1

A sample of 25 extragalactic radio sources having a spectrum peaked around 1 GHz

Gopal-Krishna, Patnaik, A.R., Steppe, H. **123**, 107

More on the quasar surface density

Savage, A. **123**, 353

Search for large-scale extension of the quasars 3C 273, 3C 345, and 3C 380

Kronberg, P.P., Reich, W. **125**, 146

A catalogue of extragalactic radio source identifications

Véron-Cetty, M.-P., Véron, P. **125**, 175; **53**, 219

A VLBI search for compact components in extended high redshift quasars

Barthel, P.D. **126**, 16

The spectroscopic nature of a sample of faint objects with ultraviolet excess

Kron, R.G., Bònoli, F., Federici, L., Zitelli, V., Vigotti, M. **127**, 29

Mass flow rates in quasars

Allan, P.M. **127**, 254

The difference in light travel time between gravitational lens images. II. Theoretical foundations

Borgeest, U. **128**, 162

Quasi-stellar Objects, individual

PKS 2251 + 113

The UV spectrum of PKS 2251 + 113 and physical conditions in the Broad Line Region

Dultzin-Hacyan, D. **128**, 148

QSO 0957 + 561

The difference in light travel time between gravitational lens images. I. Generalization of the wavefront method to arbitrary defectors and inhomogeneous universes

Kayser, R., Refsdal, S. **128**, 156

3C 273

Rapid variability in 3C 273 at 1 mm

Sherwood, W.A., Kreysa, E., Gemünd, H.-P., Biermann, P. **117**, L5

Search for large-scale extension of the quasars 3C 273, 3C 345, and 3C 380

Kronberg, P.P., Reich, W. **125**, 146

3C 345

Search for large-scale extension of the quasars 3C 273, 3C 345, and 3C 380

Kronberg, P.P., Reich, W. **125**, 146

3C 380

Search for large-scale extension of the quasars 3C 273, 3C 345, and 3C 380

Kronberg, P.P., Reich, W. **125**, 146

R Canis Majoris Stars, see Eclipsing Binaries

Spectra of RY Sgr near Minimum Light

Spite, F., Spite, M. **80**, 61

The Ultraviolet Spectrum of UW Canis Majoris

Drechsel, H., Rahe, J., Kondo, Y., McCluskey Jr., G.E. **102**, 282; **45**, 473

R Coronae Borealis Stars

Lithium and Barium in RCrB and XX Cam

Hunger, K., Schönberner, D., Steenbock, W. **107**, 93

Radio Galaxies, see also Galaxies

Multifrequency Observations of Extended Radio Galaxies. I: 3C 310

van Breugel, W.J.M. **81**, 265

Multifrequency Observations of Extended Radio Galaxies. II. B 0844 + 31

van Breugel, W.J.M. **81**, 275

On the Slowly Varying Flux Component from the Nucleus of Cen A (NGC 5128)

Kaufmann, P., Beall, J.H. **82**, 170

Westerbork Synthesis Observations of 8 Clusters of Galaxies which Contain Tailed Radio Galaxies

Harris, D.E., Kapahi, V.K., Ekers, R.D. **82**, 394; **39**, 215

Expansion Speeds in Extended Extragalactic Double Radio Sources from Angular Structure

Banhatti, D.G. **84**, 112

- A Westerbork Survey of Rich Clusters of Galaxies. XII. Observations of A 2197 and A 2199 at 610 MHz
Gavazzi, G., Perola, G.C. **84**, 228
- A Westerbork Survey of Rich Clusters of Galaxies. XI. Observations of the Cancer Cluster at 610 MHz
Perola, G.C., Tarengi, M., Valentijn, E.A. **84**, 245
- Symmetry of Double Radio Sources and Their Central Radio Cores
Gopal-Krishna **86**, L3
- Linear Polarization Measurements of Extragalactic Radio Sources at $\lambda\lambda$ 17.4 and 18.9 cm
Simard-Normandin, M., Kronberg, P.P., Neidhöfer, J. **86**, 268; **40**, 319
- Observations at 408-MHz of Sources in the $\pm 4^\circ$ Declination Strip of the Parkes 2700-MHz Survey
Grueff, G., Maccacaro, T., Wall, J.V. **87**, 252; **41**, 21
- Multifrequency Observations of Extended Radio Galaxies III: 3C 465
van Breugel, W.J.M. **88**, 248
- A Study of the 5' Halo of 3C 84
Reich, W., Stute, U., Wielebinski, R. **89**, 204
- Circular Polarization as a Probe of Radio Sources (High Accuracy Polarization Measurements at λ 49 cm)
Weiler, K.W., de Pater, I. **91**, 41
- Collimation of Electromagnetic Beams in Extragalactic Radio Sources
Ferrari, A., Massaglia, S., Dobrowolny, M. **92**, 246
- High Dynamic Range Observations in the Fields of Strong Extragalactic Radio Sources
Stute, U., Reich, W., Kalberla, P.M.W. **92**, 323; **42**, 299
- Westerbork Observations of B2 Radio Sources in Abell Clusters of Galaxies
Harris, D.E., Lari, C., Vallée, J.P., Wilson, A.S. **92**, 324; **42**, 319
- Spectroscopic Observations of HII Regions in NGC 5128. I. Radial Velocities
Möllenhoff, C. **93**, 248
- High-energy X-ray Observations of Extragalactic Objects
Pietsch, W., Reppin, C., Trümper, J., Voges, W., Lewin, W., Kendziorra, E., Staubert, R. **94**, 234
- An Analysis of the Cosmological Evolution of Radio Sources. II. Evolution Functions for Flat- and Steep-Spectrum Sources at 1400 MHz
Machalski, J. **95**, 209; **43**, 91
- Multifrequency Observations of Very Large Radio Galaxies. III: NGC 315
Willis, A.G., Strom, R.G., Bridle, A.H., Fomalont, E.B. **95**, 250
- Multifrequency Observations of Extended Radio Galaxies. IV. The Large Radio Jet Galaxy 4CT 74.17.1
van Breugel, W.J.M., Willis, A.G. **96**, 332
- Linear Polarization Measurements at λ 11 cm
Parma, P., Weiler, K.W. **96**, 412
- V LBI Observations of the Nucleus of the Radio Galaxy Cygnus A
Kellermann, K.I., Downes, A.J.B., Pauliny-Toth, I.I.K., Preuss, E., Shaffer, D.B., Witzel, A. **97**, L1
- Standard Sources at 10.6 GHz and Variability in 3C 147
Andrew, B.H., MacLeod, J.M., Feldman, P.A. **99**, 36
- Spectroscopic Observations of HII Regions in NGC 5128. II. Quantitative Spectroscopy
Möllenhoff, C. **99**, 341
- Further Evidence for the Strong Steepening of the Median Radio Spectrum with Decreasing Intensity of Sources Selected at 5 GHz
Machalski, J., Ryś, S. **99**, 388
- Structure and Position Measurements at 5 GHz of Radiogalaxies Selected from the B2 Catalog
Grueff, G., Kotanyi, C., Schiavo-Campo, P., Tanzella-Nitti, G., Vigotti, M. **99**, 403; **44**, 241
- DA 240 and 3C 236: Spatial Variation in their Radio Spectra and Its Implications
Strom, R.G., Baker, J.R., Willis, A.G. **100**, 220
- The Structure of a Sample of Low Luminosity Radio Galaxies
Ekers, R.D., Fanti, R., Lari, C., Parma, P. **101**, 194
- Extragalactic Radio Sources with very Steep Decimetre-wave Spectrum
Gopal-Krishna, Steppe, H. **101**, 315
- Low Frequency Variable Sources 5 Year Monitoring Program at 408 MHz
Fanti, C., Fanti, R., Ficarra, A., Mantovani, F., Padrielli, L., Weiler, K.W. **101**, 418; **45**, 61
- Westerbork 5 GHz Observations of Head-tail Radio Sources in A 2022, A 2256, and A 2462
Valentijn, E.A. **102**, 53
- Optical Spectroscopic and Electronographic Observations of the Radio Galaxy IC 5063
Appenzeller, I., Gaida, G. **102**, 230
- The Appearance of Broad Emission Lines in the Spectrum of BL Lac Object PKS 0521-36
Ulrich, M.H. **103**, L1
- Observations of the Head-tail Radio Galaxy NGC 3862 (3C 264) at 0.6, 1.4, and 5.0 GHz
Gavazzi, G., Perola, G.C., Jaffe, W. **103**, 35
- The Unsteady Beam
Nepveu, M. **105**, 15
- Further Observations of Radio Sources from the BG Survey. I. The Non-thermal Sources near $l = 94^\circ$
Mantovani, F., Nanni, M., Salter, C.J., Tomasi, P. **105**, 176
- Radio and Optical Observations of 9 Nearby Abell Clusters: A262, A347, A569, A576, A779, A1213, A1228, A2162, A2666
Fanti, C., Fanti, R., Feretti, L., Ficarra, A., Gioia, I.M., Giovannini, G., Gregorini, L., Mantovani, F., Marano, B., Padrielli, L. **105**, 200
- Compact and Extended Structure in B2 Radio Sources of Intermediate Strength
Padrielli, L., Kapahi, V.K., Katgert-Merkelijn, J.K. **106**, 181; **46**, 473
- Upper Limits of a Cosmic Infrared Background Flux as Determined by X- and Gamma-ray Observations of M87
Schlickeiser, R., Harwit, M. **107**, 186
- Optical Identification/Flux Density Relationship for Radio Galaxies
Swarup, G., Subrahmanya, C.R., Venkatakrishna, K.L. **107**, 190
- Determination of Physical Parameters in the Radio Source 5C 4.81
Roland, J. **107**, 267
- The Optical Spectrum of the Radio Galaxy PKS 2152-69
Marenbach, G., Appenzeller, I. **108**, 95
- Integrated Linear Polarization of Extragalactic Radio Sources at 10.5 GHz (λ 2.86 cm). II
Simard-Normandin, M., Kronberg, P.P., Button, S. **108**, 416; **48**, 137
- Multifrequency High Resolution Observations of the Large Radio Galaxy B2 1321+31
Fanti, R., Lari, C., Parma, P., Bridle, A.H., Ekers, R.D., Fomalont, E.B. **110**, 169

- Radial Velocities of Galaxies Detected in the Arecibo 2380 MHz Survey
 Marano, B., Vettolani, G. **110**, 183; **48**, 453
- Multifrequency Comparison of the Total Intensity and Polarization Distributions for 3C 31, 3C 66B, and 3C 129
 van Breugel, W. **110**, 225
- Spectral Index Behaviour of Low Frequency Variable Radio Sources
 Mantovani, F. **110**, 345
- Radio and X-ray Observations of the Abell 2241 Galaxy Clusters
 Bijleveld, W., Valentijn, E.A. **111**, 50
- Diffusion of Electrons in Radio Galaxies
 Valtaoja, E. **111**, 213
- Radio and X-ray Galaxies in Abell 566
 Harris, D.E., Robertson, J.G., Dewdney, P.E., Costain, C.H. **111**, 299
- Multifrequency Observations of Extended Radio Galaxies V: 3C 31, 3C 33.1, 3C 35, 3C 66B, 3C 129, 3C 130, 3C 223, 3C 310, 3C 390.3 and 4C 48.29
 Van Breugel, W., Jägers, W. **112**, 180; **49**, 529
- Nonlinear Shear Instabilities in an Infinite Slab
 Nepveu, M. **112**, 223
- Spectral Index - Flux Density Relation for Extragalactic Radio Sources Found in Metre-wavelength Surveys
 Gopal-Krishna, Steppe, H. **113**, 150
- Statistical Correction of Projection of Radio-sources on the Sky and Application to the Apparent Size-Redshift and Linear Size-Line Width Relation
 Nottale, L. **113**, 223
- Structure of Dynamics of Supersonic Jets
 Norman, M.L., Smarr, L., Winkler, K.-H. A., Smith, M.D. **113**, 285
- On the Interpretation of Optically Thin Synchrotron Spectra
 Pineault, S. **114**, 177
- The Influence of Buoyancy on the Stability of Jets
 Achterberg, A. **114**, 233
- How Well is Gas Mixed in Clusters of Galaxies?
 Nepveu, M. **114**, 337
- Local Coupling of Surface MHD Waves with Kinetic Alfvén Waves in Jets
 Bodo, G., Ferrari, A. **114**, 394
- Merlin Observations of Compact Sources with Very Steep Radio Spectra
 Roland, J., Véron, P., Stannard, D., Muxlow, T. **116**, 60
- Optical spectroscopy of flat spectrum radio sources
 Fricke, K.J., Kollatschny, W., Witzel, A. **117**, 60
- The low frequency variability of extragalactic radio sources: discussion of the properties
 Fanti, C., Fanti, R., Ficarra, A., Gregorini, L., Mantovani, F., Padrielli, L. **118**, 171
- Optical counterparts of radio sources from 5 GHz surveys: identification between RA = 4 h and RA = 14 h
 Meisenheimer, K., Röser, H.-J. **118**, 208; **51**, 41
- Flux density measurements of bright extragalactic sources at 36.8 GHz
 Salonen, E., Lehto, H., Urpo, S., Teerikorpi, P., Teräsanta, H., Haarala, S., Valtaoja, E., Tähtinen, L., Sillanpää, A., Tiuri, M., Valtonen, M. **118**, 208; **51**, 47
- A search for neutral hydrogen in radio galaxies
 Shostak, G.S., van Gorkom, J.H., Ekers, R.D., Sanders, R.H., Goss, W.M., Cornwell, T.J. **119**, L3
- WSRT radio observations at 1.4 GHz of 32 Abell clusters of distance class 3 and 4
 Fanti, C., Fanti, R., Feretti, L., Gioia, I.M., Giovannini, G., Gregorini, L., Padrielli, L., Parma, P., Tomasi, P., Marano, B. **119**, 163; **51**, 179
- Precise optical positions for radio/optical astrometric sources in the southern hemisphere
 Costa, E., Torres, C., Wroblewski, H. **119**, 324; **51**, 425
- Variability at 5 GHz in low luminosity radio nuclei of galaxies and quasars
 Ekers, R.D., Fanti, R., Miley, G.K. **120**, 297
- Determination of physical parameters in extragalactic radio jets from large scale, small amplitude oscillations
 Ferrari, A., Trusconi, E., Zaninetti, L. **125**, 179
- WSRT observations of elliptical galaxies from the B2 catalogue
 Feretti, L., Giovannini, G., Gregorini, L., Parma, P. **126**, 311
- One-sided ejection in the prototype tailed radio galaxy 3C 129?
 Jägers, W.J., de Grijs, M.H.K. **127**, 235
- Radial Velocities**, see also Spectroscopic Binaries
- Radial Velocity Variations of B 1 Ia-O Supergiants
 Sterken, C., Wolf, B. **71**, 270; **35**, 69
- Radial Velocities of Emission and Absorption Lines in the Spectrum of the Unusual T Tauri Star V 1331 Cyg
 Chavarria, C., Appenzeller, I., Bertout, C. **75**, 262; **36**, 465
- A Catalogue of Radial Velocities in the Large Magellanic Cloud
 Feitzinger, J.V., Weiss, G. **76**, 370; **37**, 575
- On the Spectrographic and Photometric Data for the Brightest Stars in the Small Magellanic Cloud
 Ardeberg, A., Maurice, E. **77**, 269
- The Rigorous Treatment of Stellar Aberration and Doppler Shift, and the Barycentric Motion of the Earth
 Stumpff, P. **78**, 229
- On Velocity Dispersions of Galaxies in Rich Clusters
 Danese, L., De Zotti, G., di Tullio, G. **82**, 322
- Vitesse radiales d'étoiles standard de l'UAI
 Fehrenbach, Ch., Duflo, M. **83**, 383; **39**, 311
- Radial Velocities of a New Short Period Variable Star: HD 200925
 Imbert, M. **86**, 259
- Metal Abundances of F and G Dwarfs Determined by the Radial Velocity Scanner Coravel
 Mayor, M. **87**, L1
- Relative Radialgeschwindigkeiten aus Objektivprismenspektren im Bereich von 9 südlichen offenen Sternhaufen und einem Sternfeld bei η Carinae
 Gieseke, F. **88**, 284; **41**, 245
- Radial Velocity Curve, and Radius of the Pulsating Star FG Sge
 Mayor, M., Acker, A. **92**, 1
- Study of the Variable F-type Supergiants HD 161796 and HD 163506 in Radial Velocity and Photometry
 Burki, G., Mayor, M., Rufener, F. **92**, 325; **42**, 383
- Radial Velocities of Ten Shapley-Ames Galaxies Not Hitherto Observed
 West, R.M. **95**, 1
- Vitesse radiales de 713 étoiles appartenant à 4 champs de $4^\circ \times 4^\circ$, mesurées au prisme objectif de 620 mm de l'Observatoire de Haute-Provence
 Fehrenbach, Ch., Burnage, R. **95**, 396; **43**, 296
- Fabry-Perot Radial Velocities of S 274: A Planetary Nebula
 Recillas-Cruz, E., Pismis, P. **97**, 398
- Radial Velocities of the Dwarf Cepheid SZ Lyn at High Temporal Resolution
 Bardin, C., Imbert, M. **98**, 198

- Kinematical Studies of Open Clusters and OB-associations from Relative Radial Velocity Observations. I. The Open Cluster NGC 3532
Giesekeing, F. **99**, 155
- Vitesses radiales dans l'amas NGC 3144 mesurées au prisme objectif de 40 cm de l'Observatoire Européen Austral
Amieux, G., Burnage, R. **99**, 204; **44**, 101
- A CH Star in the Direction of LMC
Fehrenbach, Ch., Duflo, M. **101**, 226
- Etude de la Structure Galactique dans une Région de la Poupe
Peton-Jonas, D. **102**, 280; **45**, 193
- A RV Digital Measuring Method Applied to LAC OB 1: Preliminary Results
Bijaoui, A., Lacoarret, M., Granes, P. **102**, 282; **45**, 483
- Spectroscopic Orbits for Three Double-lined Binaries in the Hyades Field, 22° 669, vA 771, and vB 166
Griffin, R.F., Mayor, M., Gunn, J.E. **106**, 221
- The Kinematical Structure of the Bipolar Nebula AFGL 618
Carsenty, U., Solf, J. **106**, 307
- Absolute Measurement of the Bisector of the 6301.5091 Fe I Line in the Solar Spectrum
Cavallini, F., Ceppatelli, G., Righini, A. **109**, 233
- The Peculiar Classical Cepheid HR 7308
Burki, G., Mayor, M., Benz, W. **109**, 258
- Internal Motions in Planetary Nebulae
Sabbadin, F., Hamzaoglu, E. **110**, 105
- Radial Velocities from Objective-prism Plates in the Direction of the Large Magellanic Cloud (Text in French)
Fehrenbach, Ch., Duflo, M. **110**, 182; **48**, 409
- Radial Velocities of Galaxies Detected in the Arecibo 2380 MHz Survey
Marano, B., Vettolani, G. **110**, 183; **48**, 453
- Mass Motions in the Solar Chromosphere and Transition Zone
Mein, P., Simon, G., Vial, J.C., Shine, R.A. **111**, 136
- The Radial Velocity Field of the Milky Way Outside the Galactic Plane
Feitzinger, J.V., Kreitschmann, J. **111**, 255
- Vertical Structure of the Solar Photosphere II. The Small-scale Velocity Field
Durrant, C.J., Nesis, A. **111**, 272
- Radial Velocities of 617 Stars Belonging to Four Stellar Fields of 4° × 4° (Text in French)
Fehrenbach, C., Burnage, R. **112**, 178; **49**, 483
- Radial Velocity Studies of Spectroscopic Binaries with the Objective Prism I: Improved Orbital Elements for Binaries in and near NGC 2516
Giesekeing, F., Karimie, M.T. **112**, 179; **49**, 497
- Photoelectric and Spectrographic Observations of ρ Vir (HR 4828)
Antonello, E., Mantegazza, L. **112**, 395; **49**, 709
- Radial Velocities of CH Cygni During the Outburst Started in 1977
Hack, M., Rusconi, L., Sedmak, G., Engin, S., Yilmaz, N. **113**, 250
- The Expansion Velocity Field Within the Planetary Nebulae NGC 1501 and NGC 6905
Sabbadin, F., Hamzaoglu, E. **114**, 419; **50**, 1
- The Very Small Amplitude Cepheids HD 9250 and HD 14662
Burki, G., Benz, W. **115**, 30
- Kinematics of Ring-shaped Nebulae in the LMC. II. The Radial Velocity Field of N 185
Rosado, M., Georgelin, Y.M., Georgelin, Y.P., Laval, A., Monnet, G. **115**, 61
- Measurements of Solar Transition Zone Velocities and Line Broadening Using the Ultraviolet Spectrometer and Polarimeter on the Solar Maximum Mission
Simon, G., Mein, P., Vial, J.C., Shine, R.A., Woodgate, B.E. **115**, 367
- NGC 2359: the H II-region driven by the WR-star HD 56925
Goudis, C., Hippelein, H., Münch, G. **117**, 127
- Spatial-kinematical models for planetary nebulae: NGC 2371-2
Sabbadin, F., Bianchini, A., Hamzaoglu, E. **117**, 172; **50**, 523
- The morphology and dynamics of the halo of the 30 Doradus Nebula
Cox, P., Deharveng, L. **117**, 265
- Kinematical studies of open clusters and OB-associations from relative radial velocity observations. II. The Orion Belt region
Giesekeing, F. **118**, 102
- Internal motions in planetary nebulae: NGC 7354, I 289 and Hu 1-2
Sabbadin, F., Bianchini, A., Hamzaoglu, E. **118**, 210; **51**, 127
- A spectrographic study of the β Cephei star 16 Lacertae
Le Contel, J.-M., Ducatel, D., Jarzebowski, T., Jerzykiewicz, M., Valtier, J.-C. **118**, 294
- Standardization of stellar radial velocities in the presence of stellar rotation
Andersen, J., Nordström, B. **122**, 23
- A matrix photodiode array to measure Doppler shifts of solar spectral lines
Küveler, G., Wöhl, H. **122**, 69
- Radial velocities of bright southern stars. I. 139 B-type HR and FK stars
Andersen, J., Nordström, B. **123**, 360; **52**, 471
- Radial velocities of bright southern stars. II. 53 late-type HR and FK stars
Andersen, J., Nordström, B. **123**, 360; **52**, 479
- A new method of determining nebular radial velocities from Fabry-Perot interferograms
Thonnat, M., Ruffini, B., Caplan, J., Liebaria, A. **124**, 236
- Radial velocities of bright southern stars. III. Late-type standard stars at 12 Å mm⁻¹
Andersen, J., Nordström, B. **125**, 177; **53**, 287
- Radial velocities for early type stars in six galactic regions
Zentelis, N. **126**, 223; **53**, 445
- Phase dispersion minimization period analysis of the β Cephei star β Crucis
Cuyper, J. **127**, 186
- Contribution to the study of F, G, K, M binaries. II. Orbital elements of the single-lined spectroscopic binaries HD 69148 and HD 85091
Carquillat, J.M., Nadal, R., Ginestet, N., Pédoussaut, A. **127**, 425; **54**, 187
- Radiation Pressure**
- SS433: The Acceleration and Collimation Mechanisms
Milgrom, M. **78**, L9
- Radiatively Driven Winds from Extended Sources
Beltrametti, M., Perry, J.J. **82**, 99
- Radiatively Driven Winds for Different Power Law Spectra
Beltrametti, M. **86**, 169
- On the Influence of Radiation Pressure on the Light Curve of HZ Herculis
Krebs, J. **88**, 363
- Super-critical X-ray Luminosities: The Structure and Stability of a Radiation-supported Plasma Layer
Wang, Y.-M. **112**, 24

Effects of the Earth-reflected sunlight on the orbit of the LAGEOS satellite

Anselmo, L., Farinella, P., Milani, A., Nobili, A.M. **117**, 3

Radiative Transfer, see also Scattering

Formation of the Hydrogen Lyman α Line in Expanding Spherical Planetary Nebulae

Wehrse, R., Peraiah, A. **71**, 289

Remarks on Time Variations and Radiative Stability of the Celestial Masers

Bettwieser, E. **72**, 97

Radiative Transfer in Spherical Dust Shells Using a Generalized Two-stream Eddington Approximation

Haisch, B.M. **72**, 161

Line Profiles in Expanding Envelopes

Surdej, J. **73**, 1

A Monte Carlo Approach to Non-LTE Radiation Transfer Problems

Bernes, C. **73**, 67

Non-LTE Transfer with Convective Transport of Excited Atoms

Oxenius, J. **76**, 312

Radiative Transport Effects in OH Maser Sources

Kegel, W.H. **77**, 373; **38**, 131

Multidimensional Radiative Transfer in Stratified Atmospheres: Gray Radiative Equilibrium

Kneer, F., Heasley, J.N. **79**, 14

Spectral Line Formation in Axisymmetric Moving Envelopes: Method and Application to YY Orionis Stars

Bertout, C. **80**, 138

Multiple Scattering of Solar Resonance Radiation in the Nearby Interstellar Medium. I

Keller, H.U., Thomas, G.E. **80**, 227

Reduction of the Standard Problem in Radiative Transfer for a Medium of Finite Optical Thickness

Hovenier, J.W. **82**, 61

Non-LTE Transfer. V. The Asymptotics of Partial Redistribution

Frisch, H. **83**, 166

The Evolution of Protostellar Envelopes of Masses $3M_{\odot}$ and $10M_{\odot}$. II. Radiation Transfer and Spectral Appearance

Yorke, H.W. **85**, 215

Comptonization of X-rays in Plasma Clouds. Typical Radiation Spectra

Smayev, R.A., Titarchuk, L.G. **86**, 121

Numerical Solution of the Equation of Radiation Transfer in Spherical Geometry

Yorke, H.W. **86**, 286

Scaling Laws for Resonance Line Photons in an Absorbing Medium

Frisch, H. **87**, 357

Resonance-line Polarization. VI. Line Wing Transfer Calculations Including Excited State Interference

Auer, L.H., Rees, D.E., Stenflo, J.O. **88**, 302

Structure of Molecular Clouds. II. Clouds without Prominent Star Formation

Stenholm, L.G. **89**, 264

Structure of Molecular Clouds: I. Observational Constraints and CO Line Formation

Stenholm, L.G. **91**, 261; **42**, 23

Structure of Molecular Clouds. IV. Clouds with Prominent Star Formation

Stenholm, L.G. **92**, 142

The Method of Addition of Layers to Solve Non-linear Radiative Transfer Problems

Gros, M., Magnan, C. **93**, 150

The Influence of the Radiation Transfer in Cometary Dust Halos on the Production Rates of Gas and Dust

Hellmich, R. **93**, 341

Line Formation in Expanding Atmospheres: On the Validity of the Sobolev Approximation

Hamann, W.-R. **93**, 353

Multidimensional Radiative Transfer in Stratified Atmospheres.

III. Non-LTE Line Formation

Kneer, F. **93**, 387

Decelerated Flows of Matter around the Quasars PHL 5200 and RS 23

Surdej, J., Swings, J.P. **96**, 242

Acoustic Waves in the Solar Atmosphere. VI. Feautrier Type Radiation Treatment

Wolf, B.E., Schmitz, F., Ulmschneider, P. **97**, 101

Pumping of H II/OH Masers by IR Line Overlaps

Guilloteau, S., Lucas, R., Omont, A. **97**, 347

The Spectral Appearance of Dusty Protostellar Envelopes

Yorke, H.W., Shustov, B.M. **98**, 125

Dust Temperature and IR Emission in High Extinction Molecular Clouds

Natta, A., Palla, F., Panagia, N., Preite-Martinez, A. **99**, 289

Supercritical, Steady-state, Spherically Symmetric Accretion into a Black Hole

Freihoffer, D. **100**, 178

On the Transfer Equation for the Cyclotron Line in Her X-1

Melrose, D.B. **101**, 284

Formation and Transfer of Permitted Si II Emission Lines in Seyfert I Galaxies and Quasars

Dumont, A.M., Mathez, G. **102**, 1

Multiple Scattering of Solar Resonance Radiation in the Nearby Interstellar Medium. II

Keller, H.U., Richter, K., Thomas, G.E. **102**, 415

Hydrogen Line Spectrum in Quasars. I. Approximation Procedures for Line Transfer Versus an Exact Treatment

Collin-Souffrin, S., Delache, P., Dumont, S., Frisch, H. **104**, 264

Hydrogen Line Spectrum in Quasars. II. A Critical Discussion of Model Calculations for the Broad Line Region

Collin-Souffrin, S., Dumont, S., Tully, J. **106**, 362

On Excitation Through Radiative Pumping of the Fe II UV-Mult. 191 $\lambda\lambda$ 1785-88 Å Observed with IUE during the Eclipse of 32 Cyg

Hempe, K., Reimers, D. **107**, 36

Compact Gamma Ray Point Sources: Are Gamma Ray Sources Optically Thick at Lower Frequencies?

Schlickeiser, R. **107**, 378

The Fokker-Planck Equation for the Radiation Transfer in a Strongly Magnetized Plasma

Bonazzola, S. **108**, 19

Radiative Transfer: Analytic Solution of Difference Equations

Kalkofen, W., Wehrse, R. **108**, 42

Nonspherical Stellar Envelopes and Winds: Effects of Structure on Radiative Fluxes and Apparent Mass Loss Rates

Schmid-Burgk, J. **108**, 169

An Alternative Derivation of the Line Transfer Equation of an Arbitrarily Polarized Radiation in the Presence of a Magnetic Field, in non-LTE

Mathys, G. **108**, 213

Angle-averaged Redistribution Function in the Laboratory Frame

Seitz, M., Baschek, B., Wehrse, R. **109**, 10

- Radiation Transfer in Stellar Interiors
Opher, R. **109**, 191
- Radiative Transfer: Comparison of Finite Difference Equations
Kalkofen, W., Wehrse, R. **110**, 18
- A First Order Approximation Model of CO₂ Infrared Bands in the Venusian Lower Thermosphere
Battaner, E., Rodrigo, R., López-Puertas, M. **112**, 229
- Line Profile Fluctuations in a Turbulent Atmosphere
Loucif, M.L., Magnan, C. **112**, 287
- Escape Probabilities, Mean Number of Scatterings and Net Radiative Bracket for Resonance Lines
Frisch, H. **114**, 119
- Pumping of H II/OH Masers: IR Line Overlaps and Collisional Excitation by H₂
Flower, D.R., Guilloteau, S. **114**, 238
- Numerical Simulation of Radiative Transfer in Circumstellar Dust Shells. I. Spherical Shells
Lefèvre, J., Bergeat, J., Daniel, J.-Y. **114**, 341
- A Study of Ultraviolet Spectra of ζ Aur/VV Cep Systems. I. Resonance Line Formation
Hempe, K. **115**, 133
- Structure of molecular clouds. VI. The accuracy of the standard analysis
Stenholm, L.G. **117**, 41
- A linearization method for solving partial redistribution problems
Scharmer, G.B. **117**, 83
- Numerical simulation of radiative transfer in circumstellar dust shells. II. Ellipsoidal shells
Lefèvre, J., Daniel, J.-Y., Bergeat, J. **121**, 51
- The strength of the CIV 1550 Å resonance lines in planetary nebulae
Köppen, J., Wehrse, R. **123**, 67
- Propagation of high frequency waves in strongly magnetized plasmas. Mode ambiguities due to vacuum polarization
Soffel, M., Ventura, J., Herold, H., Ruder, H., Nagel, W. **126**, 251
- Efficient methods to calculate Chandrasekhar's *H*-functions
Bosma, P.B., de Rooij, W.A. **126**, 283
- Approximated collisional rates for CS-H₂ (*J*=0)
Albrecht, M.A. **127**, 409
- Fundamental relationships relevant to the transfer of polarized light in a scattering atmosphere
Hovenier, J.W., van der Mee, C.V.M. **128**, 1
- A model for BL Lac-type low frequency variables
Salvati, M., Fanti, R. **128**, 165
- Radio Frequency Lines**, see Radio Frequency Lines: Molecular Lines, ... Recombination Lines, ... 21 cm Line
- Reduction of Baseline Ripple in Millimeter Radio Spectra by Quasi-optical Phase Modulation
Goldsmith, P.F., Scoville, N.Z. **82**, 337
- A Search for Radio Spectral Lines from SS 433
Cohen, N.L., Drake, F.D. **89**, L6
- Radio Frequency Lines: Molecular Lines**, see also Maser, OH Sources
- Ammonia in Orion
Wilson, T.L., Downes, D., Bieging, J. **71**, 275
- Ammonia in Absorption in the Direction of Sagittarius B 2
Winniewisser, G., Churchwell, E., Walmsley, C.M. **72**, 215
- The Detection of Interstellar ¹⁵NH₃
Wilson, T.L., Pauls, T. **73**, L10
- Observations of the Oxygen-18 Isotope of Formaldehyde
Henkel, C., Wilson, T.L., Downes, D. **73**, L13
- Interstellar CH: Excitation Temperatures and Abundance Relative to H₂CO
Genzel, R., Downes, D., Pauls, T., Wilson, T.L., Bieging, J. **73**, 253
- Detection of Extragalactic Ammonia
Martin, R.N., Ho, P.T.P. **74**, L7
- Catalogue of Late-type Stars with OH, H₂O or SiO Maser Emission
Engels, D. **75**, 259; **36**, 337
- A Search for CaO at mm-Wavelengths in Stars and Molecular Clouds
Hocking, W.H., Winniewisser, G., Churchwell, E., Percival, J. **75**, 268
- Molecular Cloud Structure from 2-cm Formaldehyde and 2.6 mm Carbon Monoxide Lines
Scoville, N.Z., Wannier, P.G. **76**, 140
- Formaldehyde Absorption and Visual Extinction in Several Dark Clouds near NGC 2264
Minn, Y.K., Greenberg, J.M. **77**, 37
- Observations of Carbon Monoxide Isotopes in External Galaxies
Encenaz, P.J., Stark, A.A., Combes, F., Wilson, R.W. **78**, L1
- Formaldehyde Kinematics and Distribution near the Cone Nebula and IR Source in NGC 2264
Greenberg, J.M., Minn, Y.K., Tielens, A.G.G.M. **78**, 100
- A Search for CO in Markarian and Seyfert Galaxies
Wilson, T.L., Fricke, K.J., Biermann, P. **79**, 245
- OH and NH₃ Observations of the Molecular Cloud Cep A
Cesarsky, D.A., Little, L.T., Brown, A.R. **80**, L1
- A New Main Line OH Maser with a Probable Zeeman Pattern
Wouterloot, J.G.A., Habing, H.J., Herman, J. **81**, L11
- Cyanoacetylene and Cyanodiacetylene in Interstellar Clouds
Walmsley, C.M., Winniewisser, G., Toelle, F. **81**, 245
- Formaldehyde in Giant Molecular Clouds: H₂ Densities and Corrections to the (¹²C/¹³C) Ratios
Henkel, C., Walmsley, C.M., Wilson, T.L. **82**, 41
- CH Observations of Three Bright Rimmed Molecular Clouds
Sandell, G., Höglund, B., Friberg, P. **83**, 226
- The Hydroxyl Ion in Interstellar Clouds
Singh, P.D., de Almeida, A.A. **84**, 177
- Observations of the *J*=2→1 Transitions of ¹²C¹⁶O and ¹²C¹⁸O Towards Galactic H II Regions
White, G.J., Watt, G.D., Beckman, J.E., Rose, W.B., van Vliet, A.H.F. **84**, 212
- H₂O Masers - Survey of the Galactic Plane I
Scalise Jr, E., Braz, M.A. **85**, 149
- Observations of Millimeter Wave Emission from Interstellar HCO⁺, HCN, HNC, and CCH
Baudry, A., Combes, F., Perault, M., Dickman, R. **85**, 244
- H I 10 α and H₂CO Survey of Galactic Radio Sources
Downes, D., Wilson, T.L., Bieging, J., Wink, J. **86**, 269; **40**, 379
- Formaldehyde in the Galactic Center Region: Interpretation
Güsten, R., Downes, D. **87**, 6
- HCN Absorption Towards Cassiopeia A
Encenaz, P.J., Stark, A.A., Combes, F., Linke, R.A., Lucas, R., Wilson, R.W. **88**, L1
- Ammonia and Cyanoacetylene Observations of the High Density Core of L 183 (L 134 N)
Ungerechts, H., Walmsley, C.M., Winniewisser, G. **88**, 259
- Formaldehyde as a Probe of Dark Clouds
Sandqvist, A., Bernes, C. **89**, 187

- Structure of Molecular Clouds. II. Clouds without Prominent Star Formation
Stenholm, L.G. **89**, 264
- OH Observations of Molecular Complexes in Orion and Taurus
Baud, B., Wouterloot, J.G.A. **90**, 297
- Ammonia Excitation: The Absorbing Cloud Toward W 3 (OH)
Pauls, T., Wilson, T.L. **91**, L11
- Observations of the $3_{12}-3_{13}$ Line of H_2CO
Wilson, T.L., Walmsley, C.M., Henkel, C., Pauls, T., Mattes, H. **91**, 36
- The Area Around the Orion Nebula Observed in the CO ($J=1-0$) Transition
Gillespie, A.R., White, G.J. **91**, 257
- Search for H_2O Maser Emission in Nearby Galaxies
Huchtmeier, W.K., Richter, O.-G., Witzel, A., Pauliny-Toth, I. **91**, 259
- Structure of Molecular Clouds: I. Observational Constraints and CO Line Formation
Stenholm, L.G. **91**, 261; **42**, 23
- Formaldehyde in the Galactic Center Region: Observations
Bieging, J., Downes, D., Wilson, T.L., Martin, A.H.M., Güsten, R. **91**, 379; **42**, 163
- Structure of Molecular Clouds. IV. Clouds with Prominent Star Formation
Stenholm, L.G. **92**, 142
- A Complete CO Map of a Spiral Arm Region in M 31
Boulanger, F., Stark, A.A., Combes, F. **93**, L1
- A Search for H_2O Emission from Orion Population Stars
Thum, C., Bertout, C., Downes, D. **94**, 80
- A Molecular Line Study of the Elongated Dark Dust Cloud TMC 1
Tölle, F., Ungerechts, H., Walmsley, C.M., Winnewisser, G., Churchwell, E. **95**, 143
- Searches for Interstellar Imidazole and Cyanoform
Irvine, W.M., Elländer, J., Hjalmarsen, Å., Kollberg, E., Rydbeck, O.E.H., Sørensen, G.O., Bak, B., Svanholt, H. **97**, 192
- The Distribution of OH, CH and Extinction in L 1642
Sandell, G., Johansson, L.E.B., Nguyen-Q-Rieu, Mattila, K. **97**, 317
- Small Scale Clumping in the Orion Molecular Cloud
Bastien, P., Bieging, J., Henkel, C., Martin, R.N., Pauls, T., Walmsley, C.M., Wilson, T.L., Ziurys, L.M. **98**, L4
- Emission-absorption Observations of OH in Diffuse Interstellar Clouds
Dickey, J.M., Crovisier, J., Kazès, I. **98**, 271
- The Abundance and Excitation of the Carbon Chains in Interstellar Molecular Clouds
Bujarrabal, V., Guélin, M., Morris, M., Thaddeus, P. **99**, 239
- H_2CO and CO Observations of TMC 1
Henkel, C., Wilson, T.L., Pankonin, V. **99**, 270
- SiO Isotopes in Orion A
Olofsson, H., Hjalmarsen, Å., Rydbeck, O.E.H. **100**, L30
- Detection of the CO $J=4-3$ Transition from the Kleinman Low Nebula
van Vliet, A.H.F., de Graauw, Th., Lee, T.J., Lidholm, S., v.d. Stadt, H. **101**, L1
- Cyanopolyne Absorption in the Direction of Cassiopeia A
Bell, M.B., Feldman, P.A., Matthews, H.E. **101**, L13
- Detection of the $J=1-0$ and $J=2-1$ Rotational Lines of SiS in the Molecular Envelope of IRC + 10216
Grasshoff, M., Tiemann, E., Henkel, C. **101**, 238
- CO ($J=2-1$) Observations of Southern H II Regions
de Graauw, T., Lidholm, S., Fitton, B., Beckman, J., Israel, F.P., Nieuwenhuijzen, H., Vermue, J. **102**, 257
- Ammonia Observations of Cold Cloud Cores
Ungerechts, H., Walmsley, C.M., Winnewisser, G. **111**, 339
- OH Observations of NH_3 Sources
Little, L.T., Cesarsky, D.A. **112**, 49
- Extended and Anisotropic High-velocity Gas Flows in the Orion-KL Region
Olofsson, H., Elländer, J., Hjalmarsen, Å., Rydbeck, G. **113**, L18
- The H II Region - Molecular Cloud Complex Sh 2-269: An Optical and Millimeter Wavelength Study
Heydari-Malayeri, M., Testor, G., Baudry, A., Lafon, G., de la Noë, J. **113**, 118
- Temperatures and Scales of Giant Cloud Complexes in the Spiral Galaxy IC 342
Ho, P.T.P., Martin, R.N., Ruf, K. **113**, 155
- Formaldehyde Absorption in S 128
Heske, A., Wendker, H.J. **113**, 170
- Detection of the (8,8) and (9,9) Absorption Lines of Ammonia: The Hot Molecular Cloud Toward Sgr B 2
Wilson, T.L., Ruf, K., Walmsley, C.M., Martin, R.N., Pauls, T.A., Batrla, W. **115**, 185
- CO $J=3-2$ and Submillimetre Continuum Observations of Two Molecular Outflow Sources
Phillips, J.P., White, G.J., Ade, P.A.R., Cunningham, C.T., Richardson, K.J., Robson, E.I., Watt, G.D. **116**, 130
- Structure of molecular clouds. VI. The accuracy of the standard analysis
Stenholm, L.G. **117**, 41
- High density molecular gas in the ρ Ophiuchi cloud
Martin-Pintado, J., Wilson, T.L., Gardner, F.F., Henkel, C. **117**, 145
- SiO isotope emission from Orion: a model for IRC 2
Deguchi, S., Nguyen-Quang-Rieu **117**, 314
- HCN $J=1-0$ observations in L 673 and S 235B: two different cases of hyperfine anomalies
Sandell, G., Höglund, B., Kislyakov, A.G. **118**, 306
- Formaldehyde toward Cas A: cloud sizes and H_2 densities
Batrla, W., Wilson, T.L., Martin-Pintado, J. **119**, 139
- VLA observations of H_2CO in DR 21
Dickel, H.R., Lubenow, A.F., Goss, W.M., Forster, J.R., Rots, A.H. **120**, 74
- Detection of HCO^+ and HCN absorption towards three galactic H II-regions
Nyman, L.-Å. **120**, 307
- The nuclear hyperfine structure of deuterated ammonia
Bester, M., Urban, S., Yamada, K., Winnewisser, G. **121**, L13
- The Cygnus X region. XIII. The dark cloud between IC 1318 b and c
Wendker, H.J., Schramm, K.J., Dieckvoss, C. **121**, 69
- Emission and absorption at 6 cm from excited OH associated with compact H II regions
Gardner, F.F., Martin-Pintado, J. **121**, 265
- Ammonia as a molecular cloud thermometer
Walmsley, C.M., Ungerechts, H. **122**, 164
- Infrared and microwave fluorescence of carbon monoxide in comets
Crovisier, J., Le Boullo, J. **123**, 61
- The molecular cloud-H II region complexes associated with Sh 90 and Sh 235
Lafon, G., Deharveng, L., Baudry, A., de La Noë, J. **124**, 1

- Clumping in Orion KL: 2-arcsecond maps of ammonia
Pauls, T.A., Wilson, T.L., Bieging, J.H., Martin, R.N. **124**, 23
 The H₂O/OH maser 342.01 + 0.25: a case of supernova-induced star formation?
Sandell, G., Scalise Jr, E., Braz, M.A. **124**, 139
 Ammonia toward DR21: a weak maser in ortho-NH₃?
Guilloteau, S., Wilson, T.L., Martin, R.N., Batrla, W., Pauls, T.A. **124**, 322
 The magnetic field of the NGC2024 molecular cloud: detection of OH line Zeeman splitting
Crutcher, R.M., Kazès, I. **125**, L23
 H₂-densities and masses of the molecular clouds close to the galactic center
Güsten, R., Henkel, C. **125**, 136
 Infrared objects near H₂O masers in regions of active star formation. III. Evolutionary phases deduced from IR recombination line and other data
Moorwood, A.F.M., Salinari, P. **125**, 342
 Ammonia absorption toward W3 (OH): 0''3 resolution maps in the (2,2) line
Guilloteau, S., Stier, M.T., Downes, D. **126**, 10
 Formaldehyde, cold neutral hydrogen and dust distribution in a globular filament in Taurus
Pöppel, W.G., Rohlfs, K., Celnik, W. **126**, 152
 Radio searches for additional interstellar molecules
Hollis, J.M., Suenram, R.D., Lovas, F.J., Snyder, L.E. **126**, 393
 Observations of SO₂ and HCS⁺ in cold molecular clouds
Irvine, W.M., Good, J.C., Schloerb, F.P. **127**, L10
 Non-metastable ammonia absorption toward compact H II regions
Wilson, T.L., Mauersberger, R., Walmsley, C.M., Batrla, W. **127**, L19
 Further observations of the N = 1 → 0 transition of C₄H
Bell, M.B., Matthews, H.E., Sears, T.J. **127**, 241
 Formaldehyde towards compact H II: densities and isotope ratios
Henkel, C., Wilson, T.L., Walmsley, C.M., Pauls, T. **127**, 388
 Observations of microwave transitions of A-state acetaldehyde in Sgr B2
Bell, M.B., Matthews, H.E., Feldman, P.A. **127**, 420
 Clumping in molecular clouds. The region between OMC1 and 2
Batrla, W., Wilson, T.L., Bastien, P., Ruf, K. **128**, 279
 The isotopic abundance of interstellar oxygen derived from 18-cm line observations
Bujarrabal, V., Cernicharo, J., Guélin, M. **128**, 355
- Radio Frequency Lines: Recombination Lines**
 The Electron Temperatures of H II Regions Determined from Radio Recombination Line Observations at 22 GHz
Wilson, T.L., Bieging, J., Wilson, W.E. **71**, 205
 The Structure of W 51
Pankonin, V., Payne, H.E., Terzian, Y. **75**, 365
 Studies of Ionized Carbon Regions in Dark Clouds
van Gorkom, J.H., Shaver, P.A., Goss, W.M. **76**, 1
 Electron Temperature Gradients with Distance from the Galactic Center?
Wilson, T.L., Pauls, T.A., Ziurys, L.M. **77**, L3
 A Search for Radio Recombination Lines from Galaxies and Quasars
Churchwell, E., Shaver, P.A. **77**, 316
 Observations of the Supernova Remnant 3C391 at 1.4 and 10.7 GHz
Goss, W.M., Skellern, D.J., Watkinson, A., Shaver, P.A. **78**, 75
 Pressure Broadening of Radio Recombination Lines from Multiple-component H II Regions
Shaver, P.A. **78**, 116
 On the Interpretation of the 137 β/109 α Ratio
Shaver, P.A., Wilson, T.L. **79**, 312
 Radio Determination of Oxygen Abundance Variation in the Galaxy
Mezger, P.G., Pankonin, V., Schmid-Burgk, J., Thum, C., Wink, J. **80**, L3
 b_n Factors at Low Temperatures
Ungerechts, H., Walmsley, C.M. **80**, 325
 Interpretation of Helium Recombination Line Observations of the Source Sgr B 2
Pitault, A., Cesarsky, D.A. **82**, 203
 Radio Recombination Lines from NGC 253
Mebold, U., Shaver, P.A., Bell, M.B., Seaquist, E.R. **82**, 272
 On the Zeeman Splitting of High n Recombination Lines
Greve, A., Pauls, T. **82**, 388
 Recombination Line Observations of the Galactic Center: The Arc-like Source
Pauls, T., Mezger, P.G. **85**, 26
 H110α and H₂CO Survey of Galactic Radio Sources
Downes, D., Wilson, T.L., Bieging, J., Wink, J. **86**, 269; **40**, 379
 Aperture Synthesis Observations of Recombination Lines from Compact H II Regions. I. W 49 A and W 51 A
van Gorkom, J.H., Goss, W.M., Shaver, P.A., Schwarz, U.J., Harten, R.H. **89**, 150
 The Helium Ionization Structure of the Orion Nebula
Pankonin, V., Walmsley, C.M., Thum, C. **89**, 173
 An H 167 α Line Map of the Extended H II Region S252 (NGC 2175)
Donati Falchi, A., Felli, M., Tofani, G. **89**, 363
 Why is Observable Radio Recombination Line Emission from Galactic H II Regions Always Close to LTE?
Shaver, P.A. **90**, 34
 Accurate Electron Temperatures from Radio Recombination Lines
Shaver, P.A. **91**, 279
 The "Helium Problem" in the Source DR 21
Pitault, A. **91**, 374
 Radio Recombination Lines in MWC 349
Altenhoff, W.J., Strittmatter, P.A., Wendker, H.J. **93**, 48
 Aperture Synthesis Observations of Recombination Lines from Compact H II Regions. II. The Radio Sources near K 3-50
van Gorkom, J.H., Shaver, P.A., Pottasch, S.R., Blair, G.N., Matthews, H.E. **94**, 259
 The Electron Temperatures of W 31 C and S 206
Carral, P., Rodriguez, L.F., Chaisson, E.J. **95**, 388
 Radio Recombination Line Observations of Nearby Planetary Nebulae
Walmsley, C.M., Churchwell, E., Terzian, Y. **96**, 278
 The H I Content of Isolated Galaxies
Balkowski, Ch., Chamaraux, P. **97**, 223
 Collisional l-mixing of Rydberg States of Carbon Due to Thermal Energy Charged Particles
Dickinson, A.S. **100**, 302
 Results of a Radio Survey for New Compact H II Regions
Wink, J.E., Altenhoff, W.J., Mezger, P.G. **108**, 227
 The Structure of Orion B (NGC 2024): A Recombination Line and Continuum Map
Krügel, E., Thum, C., Martin-Pintado, J., Pankonin, V. **110**, 181; **48**, 345

On Solar Hydrogen Lines in the Far-infrared and Submillimeter Spectrum

Hoang-Binh, D. **112**, L3

WSRT Observations of the H 110 α Recombination Line in the Galactic Centre

Bregman, J.D., Schwarz, U.J. **112**, L6

Aperture Synthesis Observations of Recombination Lines from Compact H II Regions. V. NGC 7538

Goss, W.M., van Gorkom, J.H., Forster, J.R. **115**, 164

Radiative excitation and the intensities of radio recombination lines

Hoang-Binh, D. **121**, L19

Radio recombination lines and the distance to quasars

Sarazin, C.L., Wadiak, E.J. **123**, L1

An H76 α survey of galactic H II regions: electron temperature and element gradients

Wink, J.E., Wilson, T.L., Biegging, J.H. **127**, 211

Radio Frequency Lines: 21 cm Line, see also Galaxies: Radio Observations, Markarian Galaxies

The Kinematics and Distribution of Neutral Hydrogen in the Interacting Galaxy Pair NGC 4038/39

van der Hulst, J.M. **71**, 131

Self-absorption and Other Characteristics of High-angular-resolution Emission Spectra of Galactic H I

Baker, P.L., Burton, W.B. **71**, 272; **35**, 129

Accurate 21-cm H I Spectra of Four Small Galaxies

Allen, R.J., Shostak, G.S. **71**, 272; **35**, 163

H I Absorption in the Direction of CL 4

Goss, W.M., van Gorkom, J.H., Shaver, P.A. **73**, L17

Analysis of Galaxy Neutral Hydrogen Spectra

Newman, W.I. **73**, 37

Radio Emission from NGC 4319 and Markarian 205

Willis, A.G. **73**, 354

A Synoptic View of the Galaxy in H I

Cleary, M.N., Heiles, C., Haslam, C.G.T. **73**, 366; **36**, 95

The Giant Spiral Galaxy M 101: V. A Complete Synthesis of the Distribution and Motions of the Neutral Hydrogen

Allen, R.J., Goss, W.M. **73**, 366; **36**, 135

Neutral Hydrogen Observation of the Edge on Disk Galaxy NGC 891

Sancisi, R., Allen, R.J. **74**, 73

The Kinematics of the Lenticular Galaxies NGC 1291 and NGC 1326 from 21 cm Line Observations

Mebold, U., Goss, W.M., Woerden, H. van, Hawarden, T.G., Siegman, B. **74**, 100

Extended Envelope of Neutral Hydrogen around M 101

Huchtmeier, W.K., Witzel, A. **74**, 138

The H I Content of the Elliptical Galaxies NGC 2974, NGC 4105, and NGC 5846

Bottinelli, L., Gouguenheim, L. **74**, 172

The Giant Spiral Galaxy M 101: V. A Complete Synthesis of the Distribution and Motions of the Neutral Hydrogen

Allen, R.J., Goss, W.M. **74**, 366; **36**, 135

H I Observations of SO Galaxies

Biermann, P., Clarke, J.N., Fricke, K.J. **75**, 7

H I Observations of Active and Interacting Galaxies

Biermann, P., Clarke, J.N., Fricke, K.J. **75**, 19

The Structure and Kinematics of the Neutral Hydrogen Bridge between M 81 and NGC 3077

Hulst, J.M. van der **75**, 97

The Giant H I-Envelope of the Irregular Galaxy IC 10

Huchtmeier, W.K. **75**, 179

A New Determination of the Thickness of the Galactic Disk from H I-observations and a Discussion of Some Consequences for Galactic Mass Models

Celnik, W., Rohlf, K., Braunsfurth, E. **76**, 24

A Survey of OH near the Galactic Plane

Turner, B.E. **76**, 132; **37**, 1

The Large-scale Distribution of Neutral Hydrogen in the Elliptical Galaxy NGC 3962

Bottinelli, L., Gouguenheim, L. **76**, 176

An Optical and H I Study of the Interacting Galaxies NGC 1512 and 1510

Hawarden, T.G., van Woerden, H., Mebold, U., Goss, W.M., Peterson, B.A. **76**, 230

Survey of Neutral Hydrogen in the Galactic Center Region

Sinha, R.P. **76**, 258; **37**, 403

A Study of the Galactic Gas-to-dust Ratio from Observations of Globular Clusters

Mirabel, I.F., Gergely, T.E. **77**, 110

Neutral Hydrogen Absorption in the Spectra of Four Low-latitude Pulsars

Weisberg, J.M., Boriakoff, V., Rankin, J. **77**, 204

The Peculiar Scd Galaxy NGC 5474: The Distribution and Kinematics of the Neutral Hydrogen

van der Hulst, J.M., Huchtmeier, W.K. **78**, 82

H I Large-scale Distribution in Some Early Type Galaxies

Balkowski, C. **78**, 190

Neutral Hydrogen Observations of the Barred Spiral Galaxy NGC 5383

Sancisi, R., Allen, R.J., Sullivan III, W.T. **78**, 217

Observations of Neutral Hydrogen and OH in the Dark Nebula Lynds 1778/1780

Mattila, K., Sandell, G. **78**, 264

A Companion for IC 342

Rots, A.H. **80**, 255

Accurate H I Profiles of Several Nearby Galaxies

Shostak, G.S., Allen, R.J. **81**, 167

A Search for Broad Band H I Emission from Clusters of Galaxies

Shostak, G.S., Gilra, D.P., Noordam, J.E., Nieuwenhuijzen, H., de Graauw, T., Vermue, J. **81**, 223

On Galaxy Masses Determined from H I Profiles

Casertano, S.P.R., Shostak, G.S. **81**, 371

H I Absorption in the Direction of SS 433

van Gorkom, J.H., Goss, W.M., Shaver, P.A. **82**, L1

Radio Continuum and H I Observations of the Interacting Galaxies NGC 4490/85

Viallefond, F., Allen, R.J., de Boer, J.A. **82**, 207

Neutral Hydrogen Associated with Southern Supernova Remnants. I. "G 261.9, + 5.5"

Colomb, F.R., Dubner, G.M. **82**, 244

Time Variable 21 cm Lines and the Stray Radiation Problem

Kalberla, P.M.W., Mebold, U., Reich, W. **82**, 275

A Neutral Hydrogen Survey of NGC 2685

Shane, W.W. **82**, 314

Atomic Hydrogen in a Field in Cygnus X Containing the Supernova Remnant G 78.2 + 2.1

Landecker, T.L., Roger, R.S., Higgs, L.A. **82**, 393; **39**, 133

New High Resolution Radio Observations of NGC 4 258. I. The Observations

van Albada, G.D. **82**, 395; **39**, 283

The H I Deficiency of the Virgo Cluster Spirals

Chamaraux, P., Balkowski, C., Gérard, E. **83**, 38

Time Variable 21 cm Lines in High Galactic Latitudes

Kalberla, P.M.W., Mebold, U., Velden, L. **83**, 384; **39**, 337

- Neutral Hydrogen Observations and Computer Modelling of the Interacting Galaxies NGC 672-IC 1727
Combes, F., Foy, F.C., Gottesman, S.T., Weliachew, L. **84**, 85
- The Low and High Redshift Neutral Hydrogen Associated with Stephan's Quintet
Allen, R.J., Sullivan, III, W.T. **84**, 181
- Galactic H I at $l \geq 10^\circ$. II. Photographic Presentation of the Combined Southern and Northern Data
Colomb, F.R., Pöppel, W.G.L., Heiles, C. **84**, 268; **40**, 47
- H I Absorption in the Direction of the Galactic Centre
Radhakrishnan, V., Sarma, N.V.G. **85**, 249
- A Complete, High-sensitivity 21-cm Hydrogen Line Survey of M31
Cram, T.R., Roberts, M.S., Whitehurst, R.N. **85**, 266; **40**, 215
- A 21-cm Search for Periodicities in Objects of Special Interest
Seiradakis, J.H., Graham, D.A. **85**, 353
- 21-cm Line Profiles of 40 Sa Spiral Galaxies
Bottinelli, L., Gougouenheim, L., Paturel, G. **86**, 269; **40**, 355
- A Survey of Neutral Hydrogen in the Region $310^\circ \leq l \leq 325^\circ$, $-32^\circ \leq b \leq -17^\circ$
Bajaja, E., Colomb, F.R., Morras, R. **87**, 253; **41**, 67
- H I 21 cm Line Observations at Low Galactic Latitudes in the Southern Hemisphere
Bajaja, E., Morras, R. **87**, 254; **41**, 121
- Neutral Hydrogen Study of 40 Sa Spiral Galaxies
Bottinelli, L., Gougouenheim, L., Paturel, G. **88**, 32
- Neutral Hydrogen in the Field of the Elliptical Galaxy NGC 1052
Bottinelli, L., Gougouenheim, L. **88**, 108
- Neutral Hydrogen 21 cm Galactic Spectra Observed at Arecibo Towards 45 Extragalactic Radio Sources
Crovisier, J., Kazès, I., Aubry, D. **88**, 283; **41**, 229
- An Exceptional Cold Diffuse Cloud
Crovisier, J., Kazès, I. **88**, 329
- Broadband 21-cm H I Emission from Stephan's Quintet
Sullivan, W.T., III **89**, L3
- The Group of Galaxies NGC 2805-2814-2820-Markarian 108
Bosma, A., Casini, C., Heidmann, J., van der Hulst, J.M., van Woerden, H. **89**, 345
- A Study of Cold Hydrogen in the Dark Cloud Lynds 134
Winnberg, A., Grasshoff, M., Goss, W.M., Sancisi, R. **90**, 176
- H I Observations and Star Formation in the Blue Compact Galaxy I Zw 18
Lequeux, J., Viallefond, F. **91**, 269
- Kinematics of Interstellar H I in the Region $320^\circ \leq l \leq 341^\circ$, $+7^\circ \leq b \leq +26^\circ$
Olano, C.A., Pöppel, W.G.L. **94**, 151
- Statistical Properties of Interstellar Neutral Hydrogen from 21-cm Absorption Surveys
Crovisier, J. **94**, 162
- NGC 206, a Hole in M 31
Brinks, E. **95**, L1
- Neutral-hydrogen Emission Features in Scorpius and Ophiuchus and the Origin of SCO OB2
Olano, C.A., Pöppel, W.G.L. **95**, 316
- H I and Dust in Kutner's Cloud
Batrla, W., Wilson, T.L., Rahe, J. **96**, 202
- An H I Synthesis Study of the Galaxy/QSO Pair NGC 6503/1749+70.1
Shostak, G.S., Willis, A.G., Crane, P.C. **96**, 393
- 2.7 GHz Observations of the Three Old Supernova Remnants CTB1, G116.5+1.1, and G114.3+0.3 with the Effelsberg 100-m Telescope
Reich, W., Braunsfurth, E. **99**, 17
- Further 21-cm Survey Observations in the Southern Milky Way, II
Kerr, F.J., Bowers, P.F., Henderson, A.P. **99**, 203; **44**, 63
- Radial Velocities of Galaxies Determined from 21-cm Line Observations
Bottinelli, L., Gougouenheim, L., Paturel, G. **99**, 402; **44**, 217
- Détermination des rayons de céphéides. I. Vitesses radiales et dimensions de XY Cas
Imbert, M. **99**, 404; **44**, 319
- The Extended H I-envelope of NGC 5236 (M83)
Huchtmeier, W.K., Bohnenstengel, H.-D. **100**, 72
- A High Resolution 21-cm-line Survey of the Galactic Center Region
Braunsfurth, E., Rohlf, K. **100**, 333; **44**, 437
- H I Fine Structure in a High Velocity Cloud (HVC A1)
Schwarz, U.J., Oort, J.H. **101**, 305
- Statistics of Neutral Hydrogen Absorption Toward Pulsars
Dickey, J.M., Weisberg, J.M., Rankin, J.M., Boriakoff, V. **101**, 332
- H I Observations of Galaxies in the Galactic Plane
Pfleiderer, J., Gruber, M.D., Gruber, G.M., Velden, L. **102**, L21
- The Neutral Hydrogen Distribution of Irregular Galaxies
Huchtmeier, W.K., Seiradakis, J.H., Matern, J. **102**, 134
- A Southern Atlas of Galactic Hydrogen. III. The Regions $320^\circ \leq l \leq 345^\circ$, $+18^\circ \leq b \leq +26^\circ$ and $346^\circ \leq l \leq 350^\circ$, $+18^\circ \leq b \leq +20^\circ$.
Olano, C.A., Pöppel, W.G.L., Vieira, E.R. **103**, 208; **46**, 41
- A Survey of the H I Self-absorption in the ρ Ophiuchi Region
Minn, Y.K. **103**, 269
- The Giant Spiral Galaxy M 101. VII. Associations of H I Concentrations and H II Complexes
Viallefond, F., Allen, R.J., Goss, W.M. **104**, 127
- Studies of Nearly Face-on Spiral Galaxies. I. The Velocity Dispersion of the H I Gas in NGC 3938
van der Kruit, P.C., Shostak, G.S. **105**, 351
- Anomalous Motions of H I Clouds
Shaver, P.A., Radhakrishnan, V., Anantharamaiah, K.R., Retallick, D.S., Wamsteker, W., Danks, A.C. **106**, 105
- An H I Absorption Determination of the Distance of W 31
Kalberla, P.M.K., Goss, W.M., Wilson, T.L. **106**, 167
- An Effelsberg-Green Bank Galactic H I Absorption Line Survey. I. The Observations
Mebold, U., Winnberg, A., Kalberla, P.M.K., Goss, W.M. **106**, 180; **46**, 389
- H I Line Studies of Galaxies: I-General Catalogue of 21-cm Line Data
Bottinelli, L., Gougouenheim, L., Paturel, G. **106**, 182; **47**, 171
- Brightness Temperature Calibration for 21-cm Line Observations
Kalberla, P.M.W., Mebold, U., Reif, K. **106**, 190
- The Distance to the Planetary Nebula NGC 7027
Pottasch, S.R., Goss, W.M., Arnal, E.M., Gathier, R. **106**, 229
- Neutral Hydrogen Observations of Double Spiral Galaxies. I. NGC 5905 and NGC 5908
van Moorsel, G.A. **107**, 66
- A 21 cm Hydrogen Line Survey of the Small Magellanic Cloud
Bajaja, E., Loiseau, N. **108**, 415; **48**, 71
- H I-Observations of Galaxies in the Pegasus I Cluster
Richter, O.-G., Huchtmeier, W.K. **109**, 155
- Extended H I-envelopes Around Spiral Galaxies: NGC 2655 and NGC 2715
Huchtmeier, W.K., Richter, O.-G. **109**, 331

- Westerbork Observations of H I Absorption in the Direction of Sgr A
Schwarz, U.J., Ekers, R.D., Goss, W.M. **110**, 100
- Global Properties of Sa-galaxies from H I-observations
Huchtmeier, W.K. **110**, 121
- Telescope Beam Characteristics and Temperature Scale of the Maryland-Green Bank 21-cm Line Survey
Westerhout, G., Mader, G.L., Harten, R.H. **111**, 212; **49**, 137
- The Maryland-Green Bank Galactic 21-cm Line Survey
Westerhout, G., Wendlandt, H.-U. **111**, 212; **49**, 143
- Anticenter High Velocity H I Stream (Weaver Jet) and Colliding H I Shells
Watanabe, T. **111**, 333
- A Catalogue of Radio Sources within 30' of Cep A
Hughes, V.A., Viner, M.R., Wouterloot, J.G.A. **111**, 358
- Westerbork and VLA Observations of G 127.1 + 0.5
Pauls, T., van Gorkom, J.H., Goss, W.M., Shaver, P.A., Dickey, J.M., Kulkarni, S. **112**, 120
- Neutral Hydrogen Associated with Southern Supernova Remnants. II. Lupus Loop
Colomb, F.R., Dubner, G. **112**, 141
- On a Model of Local Gas Related to Gould's Belt
Olano, C.A. **112**, 195
- High Resolution H I Observations of Messier 31
Bajaja, E., Shane, W.W. **112**, 396; **49**, 745
- Study of Spiral Galaxies from 392 New Measurements of 21-cm Line Data
Bottinelli, L., Gouguenheim, L., Paturel, G. **113**, 61
- The Galactic Center - Structure and Kinematics from 21-cm Line Measurements
Rohlfs, K., Braunsfurth, E. **113**, 237
- 21 cm Line Observations of cD Galaxies
Valentijn, E.A., Giovanelli, R. **114**, 208
- 21-cm Line Profiles of 392 Spiral Galaxies
Bottinelli, L., Gouguenheim, L., Paturel, G. **114**, 421; **50**, 101
- An Effelsberg - Green Bank Galactic H I Absorption Line Survey. II. Results and Interpretation
Mebold, U., Winnberg, A., Kalberla, P.M.W., Goss, W.M. **115**, 223
- Fine Structure in High Velocity Clouds Near the South Celestial Pole
Morras, R. **115**, 249
- NGC 1961: Stripping of a Supermassive Spiral Galaxy
Shostak, G.S., Hummel, E., Shaver, P.A., van der Hulst, J.M., van der Kruit, P.C. **115**, 293
- The Giant Spiral Galaxy M 101. VIII. Star Formation in H I-H II Associations
Viallefond, F., Goss, W.M., Allen, R.J. **115**, 373
- Neutral Hydrogen in Two Extremely Isolated Galaxies
Krumm, N., Shane, W.W. **116**, 237
- Westerbork H I observations of the H II region W 3
Goss, W.M., Retallack, D.S., Felli, M., Shaver, P.A. **117**, 115
- Neutral hydrogen observations towards the Puppis Window of the Milky Way
Stacy, J.G., Jackson, P.D. **117**, 171; **50**, 377
- An H I survey of southern galaxies
Reif, K., Mebold, U., Goss, W.M., van Woerden, H., Siegman, B. **117**, 172; **50**, 451
- Neutral hydrogen in the Cas OB6 association
Braunsfurth, E. **117**, 297
- H I line studies of galaxies. II. The 21-cm line width as an extragalactic distance indicator
Bottinelli, L., Gouguenheim, L., Paturel, G., de Vaucouleurs, G. **118**, 4
- Aperture synthesis observations of the 21 cm Zeeman effect
Bregman, J.D., Troland, T.H., Forster, J.R., Schwarz, U.J., Goss, W.M., Heiles, C. **118**, 157
- New observations of positive high velocity clouds
Morras, R., Bajaja, E. **118**, 210; **51**, 131
- A search for neutral hydrogen in radio galaxies
Shostak, G.S., van Gorkom, J.H., Ekers, R.D., Sanders, R.H., Goss, W.M., Cornwell, T.J. **119**, L3
- 21-cm line observations of 59 lenticular and spiral galaxies
Balkowski, C., Chamaraux, P. **119**, 165; **51**, 331
- A high-latitude H I-cloud with optical emission
Goerigk, W., Mebold, U., Reif, K., Kalberla, P.M.W., Velden, L. **120**, 63
- The gas distribution in the central region of the Galaxy. IV. A survey of neutral hydrogen in the region $349^\circ \leq l \leq 13^\circ$, $-10^\circ \leq b \leq 10^\circ$, $|v| \leq 350 \text{ km s}^{-1}$
Burton, W.B., Liszt, H.S. **121**, 163; **52**, 63
- Effective H I diameters of galaxies
Fouqué, P. **122**, 273
- The spatial power spectrum of galactic neutral hydrogen from observations of the 21-cm emission line
Crovisier, J., Dickey, J.M. **122**, 282
- Neutral hydrogen observations of double spiral galaxies. II. NGC 3958/3963, NGC 5289/5290, NGC 5673/IC 1029, NGC 5107/5112
van Moorsel, G.A. **125**, 176; **53**, 271
- The Hydra I cluster of galaxies. II. First results from H I-observations
Richter, O.-G., Huchtmeier, W.K. **125**, 187
- A search for neutral hydrogen near nine globular clusters
Birkinshaw, M., Ho, P.T.P., Baud, B. **125**, 271
- Formaldehyde, cold neutral hydrogen and dust distribution in a globular filament in Taurus
Pöppel, W.G., Rohlfs, K., Celnik, W. **126**, 152
- VLA synthesis of H I absorption toward Sgr A
Liszt, H.S., van der Hulst, J.M., Burton, W.B., Ondrechen, M.P. **126**, 341
- Neutral hydrogen observations of double spiral galaxies. III. NGC 3504/3512, NGC 4085/4088, IC 65/UGC 622, NGC 797/801
van Moorsel, G.A. **127**, 423; **54**, 1
- Neutral hydrogen observations of double spiral galaxies. IV. NGC 4618/4625, NGC 4016/4017, NGC 3725/UGC 6528, UGC 725/728, NGC 2336/IC 467
van Moorsel, G.A. **127**, 423; **54**, 19
- Radio Radiation, ... Sources**, see under the different Objects, and Galaxies - Radio Observation, Maser, Radio Frequency Lines, Radio Stars
- Compact Radio Sources in the Galactic Center Region
Downes, D., Goss, W.M., Schwarz, U.J., Wouterloot, J.G.A. **71**, 270; **35**, 1
- Survey of the Galactic Plane at 4.875 GHz
Altenhoff, W.J., Downes, D., Pauls, T., Schraml, J. **71**, 270; **35**, 23
- Westerbork Observations of 4 C Sources with Steep Radio Spectra
Tielens, A.G.G.M., Miley, G.K., Willis, A.G. **71**, 272; **35**, 153
- Optical Identification and 5 GHz Flux Measurements of Radiosources Selected from the B 2 Catalogue-V
Grueff, G., Vigotti, M. **72**, 380; **35**, 371

H I Absorption in the Direction of CL 4

Goss, W.M., van Gorkom, J.H., Shaver, P.A. **73**, L17

A Catalogue of Sources Found at 610 MHz with the Westerbork Synthesis Radio Telescope: Source Counts and Spectral Index Distributions

Katgert, J.K. **73**, 107

A Study of the 4C Catalogue of Radio Sources between Declinations 20° and 40°. I. 318 MHz Flux Density Measurements

Véron, M.P., Véron, P. **75**, 259; **36**, 331

A Multiple Beam Technique for Overcoming Atmospheric Limitations to Single-dish Observations of Extended Sources

Emerson, D.T., Klein, U., Haslam, C.G.T. **76**, 92

A 6 cm Source Survey with the Westerbork Synthesis Radio Telescope I. The Data

Willis, A.G., Miley, G.K. **76**, 258; **37**, 397

The Energy Spectrum of Electrons Accelerated by Weak Magnetohydrodynamic Turbulence

Achterberg, A. **76**, 276

The Calculation of Faraday Rotation Measures of Cosmic Radio Sources

Ruzmaikin, A.A., Sokoloff, D.D. **78**, 1

The Distribution of Some Intrinsic Parameters of Head-tail Radio Sources

Valentijn, E.A. **78**, 367

Spectral Index Dependent Properties of Steep Spectrum Radio

Blumenthal, G., Miley, G. **80**, 13

Radio Sources in the Vicinity of Bright Galaxies

Hummel, E. **81**, 316

A Catalogue of Linear Polarization of Radio Sources

Tabara, H., Inoue, M. **83**, 384; **39**, 379

On Shear Layers in Double Radio Sources

Nepveu, M. **84**, 14

On a Day-time Ionospheric Effect on some Radio Intensity Measurements and Interferometry

Meyer-Vernet, N. **84**, 142

Statistical Properties of Radio Sources of Intermediate Strength

Katgert-Merkelijn, J., Lari, C., Padrielli, L. **84**, 269; **40**, 91

The Orientation of Radiosources Associated with Elliptical Galaxies

Battistini, P., Bönoli, F., Silvestro, S., Fanti, R., Gioia, I.M., Giovannini, G. **85**, 101

A Study of the 4C Catalogue of Radio Sources, between Declinations 20° and 40°. II. The Sample

Véron, M.P., Véron, P. **85**, 265; **40**, 191

A Deep Survey of Selected Regions for Extragalactic Sources at 4.85 GHz

Pauliny-Toth, I.I.K., Steppe, H., Witzel, A. **85**, 329

Precise Optical Positions of Radio Sources in the Southern Hemisphere

Walter, H.G., West, R.M. **86**, 1

Calibration Radio Sources for Radio Astronomy: Precision Flux Density Measurements at 8420 MHz

Turegano, J.A., Klein, M.J. **86**, 46

Binary Model of Circinus X-1. II. Radio Emission

Haynes, R.F., Lerche, I., Murdin, P. **87**, 299

On the Derivation of a Catalogue of Radio Source Positions from Interferometric Observations

Walter, H.G. **89**, 198

A 21 cm Radio Continuum Survey of the Galactic Plane Between $l=93^\circ$ and $l=162^\circ$

Kallas, E., Reich, W. **91**, 381; **42**, 227

Radio Continuum Mapping Technique at Low Elevations, as Illustrated by Application to the Southern Part of Loop IV

Reich, W., Steffen, P. **93**, 27

Precise Optical Positions of Southern Radio Sources

Wroblewski, H., Costa, E., Torres, C. **93**, 245

Radio Emission and Chromosphere of Betelgeuse

Wischniewski, E., Wendker, H.J. **96**, 102

Interplanetary Scintillation and Jovian DAM Emission

Genova, F., Leblanc, Y. **98**, 133

Standard Sources at 10.6 GHz and Variability in 3C 147

Andrew, B.H., MacLeod, J.M., Feldman, P.A. **99**, 36

A High-resolution Search for Small-scale Structure in Sharpless H II Regions at 4.995 GHz. II. General Properties of the Entire Sample

Felli, M., Harten, R.H. **100**, 28

A High-resolution Search for Small-scale Structure in Sharpless H II Regions at 4.995 GHz. III. Description of Selected Sources

Felli, M., Harten, R.H. **100**, 42

A 408 MHz All-sky Continuum Survey. I. Observations at Southern Declinations and for the North Polar Region

Haslam, C.G.T., Klein, U., Salter, C.J., Stoffel, H., Wilson, W.E., Cleary, M.N., Cooke, D.J., Thomasson, P. **100**, 209

Compact Radio Sources at Declinations $> 67^\circ$

Waltman, E., Johnston, K.J., Spencer, J.H., Pauliny-Toth, I., Schraml, J., Witzel, A. **101**, 49

An Improved Optical Position of 3C 273B in the FK4-system

de Vegt, Chr., Gehlich, U.K. **101**, 191

Reduction of Double-Beam Observations of Extended Radio Sources

Pfleiderer, J. **101**, 320

Low Frequency Variable Sources 5 Year Monitoring Program at 408 MHz

Fanti, C., Fanti, R., Ficarra, A., Mantovani, F., Padrielli, L., Weiler, K.W. **101**, 418; **45**, 61

The Distance to G316.8-0.1

Shaver, P.A., Retallack, D.S., Wamsteker, W., Danks, A.C. **102**, 225

Free-Free Emission from Extended Envelopes. II. The Mass Loss and the Envelope Ionization

Felli, M., Panagia, N. **102**, 424

Optical Position and "Proper Motion" of the Radio Source OQ 208

Brosche, P., Geffert, M. **103**, 78

A Catalogue of Jovian Decametric Radio Observations from January 1978 to December 1979

Leblanc, Y., de la Noë, J., Genova, F., Gerbault, A., Lecacheux, A. **103**, 210; **46**, 135

Extended Radio Sources: A Method for Baseline Improvement

Pfleiderer, J. **103**, 220

Modulations in Jovian Decametric Spectra: Propagation Effects in Terrestrial Ionosphere and Jovian Environment

Genova, F., Aubier, M.G., Lecacheux, A. **104**, 229

Further Observations of Radio Sources from the BG Survey. I. The Non-thermal Sources near $l=94^\circ$

Mantovani, F., Nanni, M., Salter, C.J., Tomasi, P. **105**, 176

The Distribution of Thermal and Nonthermal Radio Continuum Emission of M31

Beck, R., Gräbe, R. **105**, 192

Radio Observations of the Giant Quasar 4C 34.47

Jägers, W., van Breugel, W., Miley, G.K., Schilizzi, R.T., Conway, R.G. **105**, 278

- Arc Structures in the Jovian Decametric Emission Observed from the Earth and from Voyager
Barrow, C.H., Lecacheux, A., Leblanc, Y. **106**, 94
- A 408 MHz All-sky Continuum Survey. II. The Atlas of Contour Maps
Haslam, C.G.T., Salter, C.J., Stoffel, H., Wilson, W.E. **106**, 181; **47**, 1
- G33.2-0.6, an Old Supernova Remnant with a Spectral Break
Reich, W. **106**, 314
- Radio Emission from Young Stars
Felli, M., Gahm, G.F., Harten, R.H., Liseau, R., Panagia, N. **107**, 354
- Results of a Radio Survey for New Compact H II Regions
Wink, J.E., Altenhoff, W.J., Mezger, P.G. **108**, 227
- A Continuum Study of Galactic Radio Sources in the Constellation of Monoceros
Graham, D.A., Haslam, C.G.T., Salter, C.J., Wilson, W.E. **109**, 145
- A Radio Continuum Survey of the Northern Sky at 1420 MHz - Part I
Reich, W. **110**, 180; **48**, 219
- The Structure of Orion B (NGC 2024): A Recombination Line and Continuum Map
Krügel, E., Thum, C., Martin-Pintado, J., Pankonin, V. **110**, 181; **48**, 345
- A Search for Radio Halo Emission at 430 MHz in 72 Rich Clusters of Galaxies
Hanisch, R.J. **111**, 97
- Diffusion of Electrons in Radio Galaxies
Valtaoja, E. **111**, 213
- A Narrow-band Splitting at the Jovian Decametric Cutoff Frequency
Leblanc, Y., Rubio, M. **111**, 284
- Optical Identification of the Radio Source 0104-408
Walter, H.G., West, R.M. **111**, 357
- Spectral Index - Flux Density Relation for Extragalactic Radio Sources Found in Metre-wavelength Surveys
Gopal-Krishna, Steppe, H. **113**, 150
- Radio Measurements in the Fields of Gamma-ray Sources. I. CG 195+04
Sieber, W., Schlickeiser, R. **113**, 314
- A Rapid Outburst of BL Lac at 2.72 GHz
Reich, W., Steffen, P. **113**, 348
- Evolutionary Luminosity Functions of Extragalactic Sources Driven by Gravitational Power
Cavaliere, A., Giallongo, E., Messina, A., Vagnetti, F. **114**, L1
- On the Interpretation of Optically Thin Synchrotron Spectra
Pineault, S. **114**, 177
- Radio Observations at 14.7 GHz of Southern Planetary Nebulae
Milne, D.K., Aller, L.H. **115**, 217; **50**, 209
- The Quasar B2 1320+29
Feretti, L., Giovannini, G., Parma, P. **115**, 423
- Radio Observations of Small Diameter Sources in the Field of the Supernova Remnant S147
Fürst, E., Reich, W., Beck, R., Hirth, W., Angerhofer, P.E. **115**, 428
- Merlin Observations of Compact Sources with Very Steep Radio Spectra
Roland, J., Véron, P., Stannard, D., Muxlow, T. **116**, 60
- Common Properties of Clusters of Galaxies Containing Radio Halos and Implications for Models of Radio Halo Formation
Hanisch, R.J. **116**, 137
- High Frequency Radio Continuum Observations of Bright Spiral Galaxies
Gioia, I.M., Gregorini, L., Klein, U. **116**, 164
- The low frequency variability of extragalactic radio sources: discussion of the properties
Fanti, C., Fanti, R., Ficarra, A., Gregorini, L., Mantovani, F., Padrielli, L. **118**, 171
- Flux density measurements of bright extragalactic sources at 36.8 GHz
Salonen, E., Lehto, H., Urpo, S., Teerikorpi, P., Teräsanta, H., Haara, S., Valtaoja, E., Tähtinen, L., Sillanpää, A., Thuri, M., Valtonen, M. **118**, 208; **51**, 47
- The rotation measures of radio sources in selected celestial zones - the Perseus Arm Window
Vallée, J.P. **118**, 210; **51**, 127
- Radio source contributions to small-scale anisotropies of the microwave background
Danese, L., De Zotti, G., Mandolesi, N. **121**, 114
- Linear polarization observations in selected celestial zones: the anticentre region
Vallée, J.P. **121**, 163; **52**, 125
- Possible supernova remnant associated with pulsar PSR 1930+22
Gómez-González, J., del Romero, A. **123**, L5
- Radio observations of Comet 1983 d
Altenhoff, W.J., Batrla, W., Huchtmeier, W.K., Schmidt, J., Stumpff, P., Walmsley, M. **125**, L19
- Search for large-scale extension of the quasars 3 C 273, 3 C 345, and 3 C 380
Kronberg, P.P., Reich, W. **125**, 146
- The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. I. New Westerbork observations of 22 cD galaxies and Einstein observations of A 1918 and A 2317
Bijleveld, W., Valentijn, E.A. **125**, 217
- The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. II. The fuelling of radio sources
Valentijn, E.A., Bijleveld, W. **125**, 223
- Observations of the ON I and ON 2 H II regions at 610 MHz
Matthews, H.E., Spoelstra, T.A.T. **126**, 433
- Radio continuum emission of nearby elliptical galaxies: statistical properties
Hummel, E., Kotanyi, C.G., Ekers, R.D. **127**, 205
- PSR 0950+08: a model for interpulse emission
Gil, J. **127**, 267
- Theoretical radio continuum maps of H II regions in the champagne phase
Yorke, H.W., Tenorio-Tagle, G., Bodenheimer, P. **127**, 313
- A VLA observation of the planetary nebula K 648 in Messier 15
Gathier, R., Pottasch, S.R., Goss, W.M. **127**, 320
- The large-scale radio structure of Fornax A
Ekers, R.D., Goss, W.M., Wellington, K.J., Bosma, A., Smith, R.M., Schweizer, F. **127**, 361
- M 33. II. A comparison of radio and optical data
Berkhuijsen, E.M. **127**, 395
- A catalogue of Jovian decametric radio observations from January 1980 to December 1981
Leblanc, Y., Gerbault, A., Rubio, M., Genova, F. **127**, 424; **54**, 135
- VLA observations of planetary nebulae at the Galactic Centre
Gathier, R., Pottasch, S.R., Goss, W.M., van Gorkom, J.H. **128**, 325
- The nature of the radio source in M3
McLean, B.J., Viner, M.R., Hughes, V.A. **128**, 434

Radio Radiation, Solar, see Solar Radio Radiation**Radio Stars**

RY Scuti - A Beta Lyrae System?

King, A.R., Jameson, R.F. **71**, 326

The UV Spectrum of the Possible Radio Star HD 26676

Stickland, D.J. **77**, 359

Radio Observations of Cyg X-1 During the 1977 Campaign

Woodsworth, A.W., Higgs, L.A., Gregory, P.C. **84**, 379

Radio Observations of Globular Clusters and Galactic Bulge X-ray Sources

Gopal-Krishna, Steppe, H. **88**, 354

Radio Emission from Cyg OB 2 No. 12

Wendker, H.J., Altenhoff, W.J. **92**, L5

Radio Recombination Lines in MWC 349

Altenhoff, W.J., Strittmatter, P.A., Wendker, H.J. **93**, 48

Very High Resolution Observations of SS 433 at 10.65 GHz

Geldzahler, B.J., Downes, A.J.B., Shaffer, D.B. **98**, 205

Collisionless Perpendicular Shocks: Applications to Solar Type II

Radio Bursts and the Antares (α Sco) B Radio Emission

Klinkhamer, F.R., Kuijpers, J. **100**, 291

Radio Observations of Pre-main-sequence Stars: Results and Interpretation

Bertout, C., Thum, C. **107**, 368

On the Discrepancy Between the Optical and Radio Position of T Tauri

de Vegt, C. **109**, L15

Comparison of Precise Optical and Radio Positions for Cyg OB2 Members and P Cyg

de Vegt, C. **109**, 282

Has P Cygni Generated a Shock Front Which Emits Nonthermal Radiation?

Wendker, H.J. **116**, L1

The Connection of a Catalogue of Stars with an Extragalactic Reference Frame

Froeschlé, M., Kovalevsky, J. **116**, 89

Meridian circle observations of FK4 radio stars

Carrasco, G., Costa, E., Loyola, P. **121**, 330; **52**, 279

A search for periodicities in the radio flaring of Cyg X-3

Woodsworth, A.W. **122**, 322

Flux density monitoring of radio stars observable by Hipparcos at S-Band and X-Band

Estalella, R., Paredes, J.M., Rius, A. **124**, 309

T Tauri South: a protostar?

Bertout, C. **126**, L1

Radio Telescopes, see also Instruments

Time Variable 21 cm Lines and the Stray Radiation Problem

Kalberla, P.M.W., Mebold, U., Reich, W. **82**, 275

Calibration Radio Sources for Radio Astronomy: Precision Flux Density Measurements at 8420 MHz

Turegano, J.A., Klein, M.J. **86**, 46

Quality Evaluation of Radio Reflector Surfaces

Greve, A., Hooghoudt, B.G. **93**, 76

Measurement of Excess Radio Transmission Length on Earth-space Paths

Hogg, D.C., Guiraud, F.O., Decker, M.T. **95**, 304

Cepstral Analysis of Broad-band Radio Emission. New Possibilities in Radio Astronomy

Afraimovich, E.L. **97**, 366

An Acousto-optical Radiospectrometer System for 22 GHz Region Line Observations

Malkamäki, L.J. **98**, 15

A Digital Spectrometer for the Westerbork Synthesis Radio Telescope

Bos, A., Raimond, E., van Someren Greve, H.W. **98**, 251

Simultaneous Calibration of Solar Radio Instruments from Decimetre to Decametre Wavelengths

Elgaröy, Ö., Slottje, C., Tlamicha, A., Urbarz, H., Zanelli, C., Zlobec, P., Bougeret, J.L., Kerdraon, A., de la Noë, J. **99**, 401; **44**, 165

Extended Radio Sources: A Method for Baseline Improvement

Pfleiderer, J. **103**, 220

Brightness Temperature Calibration for 21-cm Line Observations

Kalberla, P.M.W., Mebold, U., Reif, K. **106**, 190

Telescope Beam Characteristics and Temperature Scale of the Maryland-Green Bank 21-cm Line Survey

Westerhout, G., Mader, G.L., Harten, R.H. **111**, 212; **49**, 137

The Maryland-Green Bank Galactic 21-cm Line Survey

Westerhout, G., Wendlandt, H.-U. **111**, 212; **49**, 143

Inventory of Major Operational and Planned Ground-based Astronomical Telescopes of the Countries Represented in the European Science Foundation (Second Edition, 1982)

European Science Foundation **115**, 216; **50**, 187

The influence of ionospheric refraction on radio astronomy interferometry

Spoelstra, T.A.T. **120**, 313

One-dimensional high time resolution solar observations with the Westerbork Synthesis Radio Telescope

Kattenberg, A., Palagi, F. **125**, 1

Rayleigh Scattering, see Scattering**Recombination Lines**, see Radio Frequency Lines: Recombination Lines**Red Stars**, see also flare Stars

The Amplitude Extension and the Amplitudes Limit of Red Variables

Celis, S.L. **74**, 146

On the Reduction of Three Dimensional Interferometer Measurements

Frazer, R.H., Docherty, I.S. **84**, 75

The Use of Luyten's Magnitude Estimates in the Selection of Red Nearby Star Suspects from His Proper Motion Catalogues LHS and NLTT

Gliese, W., Jahreiss, H. **85**, 350

Supergiant and Giant M Type Stars in the Large Magellanic Cloud

Westerlund, B.E., Olander, N., Hedin, B. **95**, 395; **43**, 267

Possible Red Horizontal Branch Stars in the Galactic Field

Straizys, V., Bartkevičius, A., Sperauskas, J. **99**, 152

Smetells' Stars Nearer than 25 Parsecs

Gliese, W. **99**, 205; **44**, 131

Three Colour Observations of Southern Red Variable Giant Stars

Wisse, P.N.J. **99**, 403; **44**, 273

Distribution of Near Infrared Sources in the Galactic Disk

Hayakawa, S., Matsumoto, T., Murakami, H., Uyama, K., Thomas, J.A., Yamagami, T. **100**, 116

Note on Photometric Properties of Red Dwarfs in the Cousins VRI System

Thé, P.S., Karman, C., Alcaïno, G. **103**, 209; **46**, 105

Reddening, see Interstellar Absorption and Extinction

Redshift, see also Hubble Constant

Gravitational Redshift According to the Bi-metric Theory of Gravitation

Falik, D., Opher, R. **71**, 332

New Redshifts of Parent Galaxies of Supernovae

Barbon, R., Capaccioli, M., Tifft, W.G. **73**, 366; **36**, 129

On the Broadening of Spectral Lines by the Interaction of Photons with a New Field

Schatzman, E. **74**, 12

Selection Effect in Absorption Line Redshifts of QSOs

Basu, D. **77**, 255

Do They Observe Objects with Large Violet Shifts?

Putsil'nik, S.A. **78**, 248

The Low and High Redshift Neutral Hydrogen Associated with Stephan's Quintet

Allen, R.J., Sullivan, III, W.T. **84**, 181

Optical Identifications and Redshifts of Faint Radiogalaxies from the B2 Catalogue

Grueff, G., Vigotti, M., Spinrad, H. **86**, 50

Radial Velocities of Some Interacting Galaxies

Afanasiev, V.L., Karachentsev, I.D., Arkhipova, V.P., Dostal, V.A., Metlov, V.G. **91**, 302

Diffraction Model for Dark Ring Around Compact Object in NGC 1199

Weber, T.A. **95**, 5

An Analysis of the Redshift-magnitude Band Phenomenon in the Coma Cluster

Nanni, D., Pittella, G., Trevese, D., Vignato, A. **95**, 188

Déterminations optique et radio de vitesses radiales de galaxies parentes de supernovae

Balkowski, C., Le Denmat, G., Nottale, L. **95**, 210; **43**, 121

Predicted Redshifts of Galaxies by Broadband Photometry

Butchins, S.A. **97**, 407

A Study of Galactic Absorption as Revealed by the Reddenings of Quasars

Teerikorpi, P. **98**, 300

On the Hubble Diagram for Quasars as Corrected for Galactic Absorption: Evidence for a Separate Class of the Most Luminous Quasars

Teerikorpi, P. **98**, 309

Radial Velocities of Galaxies Determined from 21-cm Line Observations

Bottinelli, L., Gouguenheim, L., Paturel, G. **99**, 402; **44**, 217

The Combined Effect of Radioemissivity and Galaxy Type on Redshift

Moles, M., Nottale, L. **100**, 258

Redshifts of Southern Clusters of Galaxies

West, R.M., Frandsen, S. **100**, 331; **44**, 329

Untrivial Redshifts: A Bibliographical Catalogue

Reboul, H.J. **101**, 420; **45**, 129

H I Observations of Galaxies in the Galactic Plane

Pfleiderer, J., Gruber, M.D., Gruber, G.M., Velden, L. **102**, L21

Spectroscopic and Photometric Observations of Galaxies from the ESO/Uppsala List. Third Catalogue

West, R.M., Surdej, J., Schuster, H.-E., Muller, A.B., Laustsen, S., Borchkhadze, T.M. **103**, 208; **46**, 57

Further Spectroscopic Observations of 25 Quasi-stellar Objects

Surdej, J., Swings, J.P. **104**, 171; **46**, 305

Quasar-generating Superclusters: An Explanation for a Clumpy Quasar Sky?

de Ruiter, H.R., Zuiderwijk, E.J. **105**, 254

The Periodicity in the Distribution of Quasar Redshifts and the Density Perturbations in the Early Universe

Fang, L.-Z., Chu, Y.-Q., Cao, Ch. **106**, 287

A Table of Redshifts for Abell Clusters

Sarazin, C.L., Rood, H.J., Struble, M.F. **108**, L7

Direct Measurement of Cluster Expansion for Nearby Galaxy Clusters

Kaastra, J.S. **109**, L5

Perturbation of the Magnitude-Redshift Relation in an Inhomogeneous Relativistic Model: The Redshift Equations

Nottale, L. **110**, 9

The Hydra I Cluster of Galaxies. A Unique Case of Membership Definition

Richter, O.-G., Materne, J., Huchtmeier, W.K. **111**, 193

Redshifts of Parent Galaxies of Supernovae

Barbon, R., Capaccioli, M., West, R.M., Barbier, R. **111**, 210; **49**, 73

Further Investigations on Possible Correlations Between QSOs and the Lick Catalogue of Galaxies

Nieto, J.-L., Seldner, M. **112**, 321

The South West Extension of the Perseus Supercluster

Focardi, P., Marano, B., Vettolani, G. **113**, 15

The Cosmic Density Wave and Its Observable Vestige

Liu, Y.-Z. **113**, 192

Spectroscopic Observations of Thirteen Optically-selected QSOs in a Large Field Centred Around NGC 5334

Surdej, J., Swings, J.P., Arp, H., Barbier, R. **114**, 182

Perturbation of the Magnitude - Redshift Relation in an Inhomogeneous Relativistic Model. II. Correction to the Hubble Law Behind Clusters

Nottale, L. **114**, 261

Null Influence of Possible Local Extragalactic Perturbations on Tests of Redshift-Distance Laws

Nicoll, J.F., Segal, I.E. **115**, 398

Bias in observed nearby clusters of galaxies

Capelato, H.V., Dominguez-Tenreiro, R., Mazure, A., Salvador-Solé, E. **117**, 17

Perturbation of the magnitude-redshift relation in an inhomogeneous relativistic model. III. Redshift effect intrinsic to clusters of galaxies

Nottale, L. **118**, 85

Model-atmosphere analysis of high-dispersion spectra of four red giants and supergiants

Kovács, N. **120**, 21

Pairs of spiral galaxies with magnitude differences greater than one

Arp, H., Giraud, E., Sulentic, J.W., Vigier, J.P. **121**, 26

Radio recombination lines and the distance to quasars

Sarazin, C.L., Wadiak, E.J. **123**, L1

Distance and model dependence of observational galaxy cluster concepts

Segal, I.E. **123**, 151

Reflection Nebulae

Faint Nebulosity near ω Centauri

Cannon, R.D. **81**, 379

The Peculiar, Galactic Object ESO 313-N*10

West, R.M. **90**, 366

The Disappearance of V-V 1-7 and the Nature of Its Central Star

Méndez, R.H., Lee, P., O'Brien, A., Liller, W. **91**, 331

The Reflection Nebula Surrounding HD 87643

Surdej, A., Surdej, J., Swings, J.P., Wamsteker, W. **93**, 285

Photographic and Spectroscopic Observations of Planetary Nebulae

- Sabbadin, F., Hamzaoglu, E. **94**, 25
 Discovery of a Stellar Object with Surrounding Nebulosity
 Vogt, N., Wamsteker, W., Breysacher, J., Schuster, H.-E. **96**, 120
 Luminous Late-type Stars in Reflection Nebulae and/or in Very Young Stellar Clusters
 Gahm, G.F., Hultqvist, L., Liseau, R. **98**, 341
 Infrared Reflection Nebulae in S 106 and NGC 7538 E
 Tokunaga, A.T., Lebofsky, M.J., Rieke, G.H. **99**, 108
 Polarimetric Observations of S 106
 Lacasse, M.G., Boyle, D., Leveault, R., Pipher, J.L., Sharpless, S. **104**, 57
 The Kinematical Structure of the Bipolar Nebula AFGL 618
 Carsenty, U., Solf, J. **106**, 307
 More on the reflection nebula surrounding HD 87643 and the non-uniform atmosphere of the central star
 Surdej, J., Swings, J.P. **117**, 359

Refraction

- Atmospheric Limitations of Narrow-field Optical Astrometry
 Lindegren, L. **89**, 41
 Refraction in a Piecewise Polytropic Atmosphere
 Mikkola, S. **94**, 20
 Power Spectrum of Differential Refraction and Comparison with Solar Diameter Fluctuation Measurements
 Fossat, E., Grec, G., Harvey, J.W. **94**, 95
 Some Effects Produced by the Ionosphere on Radio Interferometry: Fluctuations in Apparent Source Position and Image Distortion
 Bougeret, J.L. **96**, 259
 The influence of ionospheric refraction on radio astronomy interferometry
 Spoelstra, T.A.T. **120**, 313

Relativistic Astrophysics, see also Gravitation and under the different Objects

- General Relativistic Effects and the Radius and Mass of X-ray Bursters
 Goldman, I. **78**, L15
 Photon Pair Production in Astrophysical Transrelativistic Plasmas
 Stoeger, W.R., S.J. **78**, 124
 Numerical Solutions of the Trans-relativistic Shock Relations
 Fujimura, F.S., Kennel, C.F. **79**, 299
 On the Relationship between Classical and Relativistic Theory of Stellar Aberration
 Stumpff, P. **84**, 257
 Relativistic Effects in the Hydrodynamics of the Superfluid Component of a Neutron Star
 Rothen, F. **98**, 36
 Physical Conditions in an Optically Thin Relativistic Gas Irradiated by γ -rays
 Kovner, I., Milgrom, M. **100**, 271
 Black hole electromagnetic fields and negative energy states for charged particles
 Prasanna, A.R. **126**, 111

Relativistic Particles

- On the Time Scales of the Pair Production Processes in Astrophysics
 Zdziarski, A.A. **110**, L7

Resonance Lines, see also Polarization, Stellar Chromosphere

- The UV Resonance Lines of ζ^1 Sco
 Wolf, B., Appenzeller, I. **78**, 15
 Resonance Line Profiles in A Type Supergiants from IUE and Copernicus Spectra
 Praderie, F., Talavera, A., Lamers, H.J.G.L.M. **86**, 271
 Scaling Laws for Resonance Line Photons in an Absorbing Medium
 Frisch, H. **87**, 357
 Absolute Fluxes, Equivalent Width and Centre-to-limb Profiles of the Solar Mg II Resonance Lines (I)
 Greve, A., McKeith, C.D. **90**, 224
 A Comparison of the Mg Resonance Lines in Am and Non Am Stars of Similar Temperatures
 Böhm-Vitense, E. **92**, 219
 Optical Spectroscopic and Electronographic Observations of the Radio Galaxy IC 5063
 Appenzeller, I., Gaida, G. **102**, 230
 Escape Probabilities, Mean Number of Scatterings and Net Radiative Bracket for Resonance Lines
 Frisch, H. **114**, 119
 Non-LTE Resonance Line Polarization with Partial Redistribution Effects
 Rees, D.E., Saliba, G.J. **115**, 1
 Estimated Stark widths and shifts of neutral atom and singly charged ion resonance lines
 Lakićević, I.S. **127**, 37

Ring Galaxies

- Structure of a Southern Galaxy
 Dennefeld, M., Laustsen, S., Materne, J. **74**, 123
 A New Ring Galaxy in Canes Venatici
 Brosch, N. **112**, 388

Roche Lobe, see also X-ray Binaries

- On Roche Limit in a Galaxy
 Robe, H. **97**, 182

Rotation, see also galactic Rotation, stellar Rotation

- Periodic Polarization Variations in Rotating Astrophysical Systems
 Milgrom, M. **76**, 338
 Rotation and Mass of NGC 2776
 Carozzi-Meyssonner, N. **76**, 369; **37**, 529
 Self-Similarity and the Angular Momenta of Astronomical Systems. A Basic Rule in Astronomy
 Wesson, P.S. **80**, 296
 Rotation and Mass of NGC 2976
 Carozzi-Meyssonner, N. **92**, 189
 The Giant Spiral Galaxy M 101. VI. The Large Scale Radial Velocity Field
 Bosma, A., Goss, W.M., Allen, R.J. **93**, 106
 A Kinematical Model of Asymmetric Galaxies. Application to M 33
 Colin, J., Athanassoula, E. **97**, 63
 Bar Instability and Rotation Curves
 Sellwood, J.A. **99**, 362
 Kinematics and Dynamics of M 83 from H α Interferometry. I. Observations: The Velocity Field
 Comte, G. **100**, 334; **44**, 441
 The Collapse of Rotating Stellar Cores
 Müller, E., Hillebrandt, W. **103**, 358

On the Angular Momentum of Colliding Interstellar Clouds

Horedt, G.P. **106**, 29

Density Scaling of the Angular Momentum Versus Mass Universal Relationship

Carrasco, L., Roth, M., Serrano, A. **106**, 89

Rotation and Mass of NGC 672 and IC 1727 (Text in French)

Carozzi-Meyssonier, N. **106**, 379; **47**, 237

On the Compatibility of Thermal and Hydrostatic Equilibrium in Thin Radiative Accretion Disks

Kippenhahn, R., Thomas, H.-C. **114**, 77

The cluster of galaxies SC 0316-44. Does it rotate?

Materne, J., Hopp, U. **124**, L13

Special perturbations of rotating isothermal gas clouds with constant rotational velocity

Schmitz, F. **125**, 333

Accretion disks in Seyfert nuclei: broad line profiles and asymmetries

van Groningen, E. **126**, 363

A search for halo gradients through RR Lyrae pulsators

Castellani, V., Maceroni, C., Tosi, M. **128**, 64

Photoelectric lightcurves and rotation period of the minor planet 201 Penelope

Surdej, J., Louis, B., Cramer, N., Rufener, F., Waelkens, C., Barbier, R., Birch, P.V. **128**, 262; **54**, 371

RR Lyrae Stars

Semiconvection and Period Changes in RR Lyrae Stars

Sweigart, A.V., Renzini, A. **71**, 66

On the Period-amplitude Relation for RR Lyrae Stars in Globular Clusters and the Anomalous Horizontal Branch in ω Centauri

Caloi, V. **75**, 247

Photoelectric Photometry of the RRs-Variable GP And

Gieseke, F., Hoffmann, M., Nelles, B. **75**, 261; **36**, 457

RR Lyrae Pulsators as Helium Indicators in Globular Clusters

Caputo, F., Castellani, V., Tornambè, A. **82**, 79

Photometry (VBLUW System) of 26 RR Lyrae Variables in the Direction of a Proposed Intergalactic Dust Cloud in Microscopium

van Genderen, A.M., Block, D.L. **82**, 394; **39**, 199

A Theoretical Scenario for the Evolutionary Status of HB Stars in RR-Lyrae Rich Galactic Globular Clusters

Castellani, V., Tornambè, A. **96**, 207

RR Lyrae Populations in the Galactic Field

Castellani, V., Maceroni, C., Tosi, M. **102**, 411

BD + 16°2356, an RRc Lyr Variable

Oja, T. **103**, 339

The Period and Photometry of BC Draconis

Szabados, L., Stobie, R.S. **107**, 415; **47**, 541

Considerations arising from the faint absolute magnitude of halo RR Lyrae variables and an error in the Cepheid PLC relation

Clube, S.V.M., Dawe, J.A. **122**, 255

A photometric classification of pulsating variables with periods between one and three days

Diethelm, R. **124**, 108

RS Canum Venaticorum Binaries

Photoelectric Observations of Three RS CVn-type Eclipsing Binaries: VV Mon, CQ Aur, and RU Cnc

Scaltriti, F. **72**, 378; **35**, 291

Two-colour Photoelectric Lightcurves and Elements of WW Dra

Mardirossian, F., Mezzetti, M., Cester, B., Giuricin, G. **81**, 388; **39**, 73

1977-78 and 1978-79 Photoelectric Light Curves of the RS CVn-Type Binaries VV Mon, RU Cnc and CQ Aur

Cerruti-Sola, M., Scaltriti, F., Blanco, C., Catalano, S., Marilli, E., Rodonò, M., Strazzulla, G., Chambliss, C.R. **91**, 381; **42**, 245

Four-colour Photometry of Eclipsing Binaries, XIII B: Light-curves of TY Pyxidis

Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **95**, 210; **43**, 141

The Initial Mass Ratio of Solar Type Contact Binaries

van 't Veer, F. **98**, 213

HM Sagittae: Symbiotic Cousin of the RS CVn Stars?

Blair, W.P., Stencel, R.E., Shaviv, G., Feibelman, W.A. **99**, 73

Four-colour Photometry of Eclipsing Binaries, XIII A. Photometric Elements and Absolute Dimensions of TY Pyxidis

Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **101**, 7

The Variable Lightcurves of RT Andromedae

Milano, L., Russo, G., Mancuso, S. **103**, 57

HD 36705: A New Bright X-ray Emitting RS CVn Star

Pakull, M.W. **104**, 33

Simultaneous Photoelectric and Single-trail Spectroscopic Observations of V 471 Tauri (BD + 16°516)

Hamzaoglu, E. **104**, 65

Evidence of Variable Migration Rate and a Past Direction Reversal of the RS CVn Wave-like Distortion

Blanco, C., Catalano, S., Marilli, E., Rodonò, M. **106**, 311

The Variable Light Curve of BH Virginis

Hoffmann, M. **107**, 415; **47**, 561

Model Chromospheres of RS CVn Stars: Balmer Line Profiles in λ Andromedae

Mullan, D.J., Cram, L.E. **108**, 251

Effect of Spots on a Star's Radius and Luminosity

Spruit, H.C. **108**, 348

The Flow of Heat near a Starspot

Spruit, H.C. **108**, 356

Remarkable light changes of the active RS CVn system V 711 Tau (= HR 1099) during 1979-1981

Bartolini, C., Blanco, C., Catalano, S., Cerruti-Sola, M., Eaton, J.A., Guarnieri, A., Hall, D.S., Henry, G.W., Hopkins, J.L., Landis, H.J., Louth, H., Marilli, E., Piccioni, A., Renner, T.R., Rodonò, M., Scaltriti, F. **117**, 149

Normalized photoelectric observations for a three-dimensional representation of the light changes of RS Canum Venaticorum

Lorenzi, L., Lattanzi, A., Siciliano, F. **118**, 209; **51**, 77

Infrared photometry of the RS CVn binaries. I. TY Pyxidis

Antonopoulou, E. **120**, 85

Infrared photometry of the RS CVn binaries. II. JHK light curves of HR 1099

Antonopoulou, E. **123**, 358; **52**, 381

Runaway Stars

A Comment on the Nature of O-Type Runaway Stars

Pawlowicz, L.M., Herbst, W. **86**, 68

The Possible Nature of the High-velocity OB Stars: Hot UV-bright Stars in the Galactic Disk

Carrasco, L., Bisiacchi, G.F., Cruz-González, C., Firmani, C., Costero, R. **92**, 253

Investigation of the Statistical Properties and Nature of the Runaway Stars

Isserstedt, J., Feitzinger, J.V. **96**, 181

The Detection of Compact Companions in OB-runaway Stars

Sybesma, C.H.B., de Loore, C. **111**, 229

- The Theoretical Expected Galactic Distribution of WR Runaway Stars
Vanbeveren, D. **113**, 205
- The Fastest Runaway Wolf-Rayet Star of Population I in the Galaxy, 209 BAC: Evidence for a Low Mass Companion
Moffat, A.F.J., Lamontagne, R., Seggewiss, W. **114**, 135
- The Theoretically Expected X-ray Luminosity and the Binary Nature of Wolf-Rayet Runaway Stars
Vanbeveren, D., Van Rensbergen, W., de Loore, C. **115**, 69
- The runaway Wolf-Rayet star HD 143414: evidence for a low-mass companion
Isserstedt, J., Moffat, A.F.J., Niemela, V.S. **126**, 183
- RV Tauri Stars**
- V 3955 Sgr a New Field RV Tauri/SRd Variable
Alvarez, H. **76**, 336
- The resonance hypothesis applied to RV Tauri stars
Takeuti, M., Petersen, J.O. **117**, 352
- S Stars**, see also Late Type Stars
- On the Identification Problem of the Infrared "Keenan Bands" in S Stars
Lindgren, B., Olofsson, G. **84**, 300
- Discovery of an S star in the Fornax dwarf elliptical galaxy
Westerlund, B.E. **118**, L5
- Satellites of Planets**
- Poles of the Galilean Satellites
Lieske, J.H. **75**, 158
- On the Observations of the Mutual Phenomena of the Galilean Satellites in 1979
Arlot, J.-E., Morando, B., Thuillot, W. **76**, L9
- The Formation of Planets and Satellites from Self-similar Disks
Wesson, P.S. **76**, 200
- A Statistical Method for the Determination of Orbits of Asteroids and Satellites
Dvorak, R., Edelman, C. **77**, 320
- Positions of Jupiter and Four Satellites Obtained in 1978 at ESO-La Silla by Means of the GPO ($f=400$ cm, $d=40$ cm)
Debehogne, H., Machado, L.E. **78**, 251; **38**, 275
- Determination of the Dynamical Parameters of the Galilean Satellites' Orbits
Thuillot, W. **79**, 84
- Improved Ephemerides of the Galilean Satellites
Lieske, J.H. **82**, 340
- Libration of Comet P/Boethin around the 1/1 Resonance with Jupiter
Benest, D., Bien, R., Rickman, H. **84**, L11
- Observations photographiques de Mars, de Jupiter et de ses satellites ainsi que de Saturne, effectuées en 1978 à l'astrogaphe double de 40 cm de l'Observatoire royal de Belgique
Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **85**, 266; **40**, 249
- Galilean Satellite Positions Using Image Photometric Analysis
Arlot, J.-E. **86**, 55
- Observations photographiques de Jupiter et ses satellites, effectuées en 1977 à l'astrogaphe double de 40 cm de l'Observatoire Royal de Belgique
Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **86**, 269; **40**, 363
- Jupiter and Galilean Satellites' Positions Obtained in April 1978 with the GPO 40 cm ($f=4$ M) of the ESO, La Silla
Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **86**, 269; **40**, 375
- Astrometric Study of the Uranus Satellite Miranda
Veillet, C., Ratier, G. **89**, 342
- Maximum Frequency of the Decametric Radiation from Jupiter
Barrow, C.H., Alexander, J.K. **90**, L4
- Speckle Interferometry with the CFHT 3.60 m. I. Resolution of the System Pluto-Charon
Bonneau, D., Foy, R. **92**, L1
- Theorie des mouvements de la Lune et des satellites en variables de Laplace
Lestrade, J.-F. **92**, 302
- Periodic Planetary-type Orbits of the General 4-Body Problem with an Application to the Satellites of Jupiter
Hadjidemetriou, J.D., Michalodimitrakis, M. **93**, 204
- Great Inequalities and Libration Terms of Satellites I, II, and III of Jupiter
Vu, D.T. **94**, 140
- Temporary Satellite Captures of Comets by Jupiter
Carusi, A., Valsecchi, G.B. **94**, 226
- On a Possible Origin of Charon
Mignard, F. **96**, L1
- New Determination of the Orbit of Miranda
Veillet, Chr. **98**, 218
- Gravitational Instabilities in Satellite Disks and Formation of Regular Satellites
Coradini, A., Federico, C., Magni, G. **99**, 255
- Catalogue of Eclipses of Jupiter's Galilean Satellites, 1610-2000
Lieske, J.H. **99**, 402; **44**, 209
- Location of Faint Objects in the Orbits of Thetys and Dione
Veillet, C. **102**, L5
- Variations of the Orbit of Comet P/Gehrels 3: Temporary Satellite Captures by Jupiter
Rickman, H., Malmort, A.M. **102**, 165
- Jupiter and Galilean Satellites' Positions Obtained in December 1978 at Uccle with the Double Astrogap of 40 cm ($f=2$ m)
Debehogne, H., Machado, L.E. **102**, 279; **45**, 183
- Positions of Jupiter, Galilean Satellites and Pluto Obtained in May 1980 with the GPO of the ESO, La Silla
Debehogne, H., Machado, L.E., Caldeira, J.F., Netto, E.R., Vieira, G.G. **103**, 210; **46**, 131
- Numerical Integration of the Satellites of the Outer Planets
Peters, C.F. **104**, 37
- Positions of Jupiter and Galilean Satellites in 1978
Debehogne, H., Machado, L.E., Netto, E.R., Caldeira, J.F., Vieira, G.G. **104**, 169; **46**, 171
- New Constants for the Sampson-Lieske Theory of the Galilean Satellites of Jupiter
Arlot, J.-E. **107**, 305
- Apparent Thickness and Scattering Properties of Saturn's Rings from March 1980 Observations
Sicardy, B., Lecacheux, J., Laques, P., Despiau, R., Auge, A. **108**, 296
- 415 μ m Brightness Temperature of Titan
Loewenstein, R.F., Hildebrand, R.H. **110**, L18
- Results of the PHEMU79 Observation Campaign of Mutual Phenomena of the Galilean Satellites of Jupiter in 1979 (Text in French)
Arlot, J.-E., Bernard, A., Bouchet, P., Daguiillon, J., Dourneau, G., Figer, A., Helmer, G., Lecacheux, J., Merlin, Ph., Meyer, C. **111**, 151

Observation of 2 Mutual Events Involving the Satellites of Saturn in April 1980

Dourneau, G. **112**, 73

Orbital Elements of Nereid from New Observations

Veillet, C. **112**, 277

Comparison with observations and ephemeris of Phoebe (text in French)

Bec-Borsenberger, A., Rocher, P. **117**, 171; **50**, 423

1980-81 observations of Miranda: new orbit and mass of Ariel and Umbriel

Veillet, C. **118**, 211

Jupiter's satellites J VI and J VII. Ephemerides for the years 1981 to 1990

Rocher, P. **121**, 332; **52**, 333

Speckle interferometry observations of Pluto's moon Charon

Hetterich, N., Weigelt, G. **125**, 246

Theory of the phenomena of Jupiter's Galilean satellites (Text in French)

Thuillot, W. **127**, 63

A catalogue of Jovian decametric radio observations from January 1980 to December 1981

Leblanc, Y., Gerbault, A., Rubio, M., Genova, F. **127**, 424; **54**, 135

Jovian satellites and asteroid positions observed at la Silla-GPO. Comparison of different bijections

Debehogne, H. **128**, 262; **54**, 365

Saturn

Low Tilt Angle Photometry and the Thickness of Saturn's Rings

Lumme, K., Irvine, W.M. **71**, 123

Photometric Determination of the Saturn Rings Thickness

Dollfus, A. **75**, 204

Observations photographiques de Mars, de Jupiter et de ses satellites ainsi que de Saturne, effectuées en 1978 à l'astrographe double de 40 cm de l'Observatoire royal de Belgique

Debehogne, H., de Freitas Mourão, R.R., Tavares, O.C. **85**, 266; **40**, 249

A Study of the Atmosphere of Saturn Based on Methane Line Profiles near 1.1 μ

Buriez, J.C., de Bergh, C. **94**, 382

"Flip-flop" of Electric Potential of Dust Grains in Space

Meyer-Vernet, N. **105**, 98

Apparent Thickness and Scattering Properties of Saturn's Rings from March 1980 Observations

Sicardy, B., Lecacheux, J., Laques, P., Despiau, R., Auge, A. **108**, 296

415 μ m Brightness Temperature of Titan

Loewenstein, R.F., Hildebrand, R.H. **110**, L18

Observation of 2 Mutual Events Involving the Satellites of Saturn in April 1980

Dourneau, G. **112**, 73

Improvement of the Theories of Jupiter and Saturn by Harmonic Analysis (in French)

Simon, J.L., Francou, G. **114**, 125

Comparison with observations and ephemeris of Phoebe (text in French)

Bec-Borsenberger, A., Rocher, P. **117**, 171; **50**, 423

A determination of the masses of Saturn and Uranus from the motion of the minor planets (944) Hidalgo and (2060) Chiron (text in German)

Landgraf, W. **119**, 95

Scattering

Scattering from a Cylindrical Dust Cloud in an Isotropic Radiation Field

Brand, P.W.J.L. **71**, 47

The Profile Evolution of X-ray Spectral Lines Due to Comptonization. Monte Carlo Computations

Pozdnyakov, L.A., Sobol, I.M., Sunyaev, R.A. **75**, 214

Compton and Synchrotron Processes in Spherically-symmetric Nonthermal Sources

Gould, R.J. **76**, 306

Periodic Polarization Variations in Rotating Astrophysical Systems

Milgrom, M. **76**, 338

Approximate Formulae for Electron Scattering in a Strong Magnetic Field

Börner, G., Mészáros, P. **77**, 178

Thomson Scattered Lines in the Spectrum of SS 433. A Powerful Tool for Studying the System

Milgrom, M. **78**, L17

Dynamical Effects in Resonant Scattering by Interplanetary Helium

Wallis, M.K., Wallis, J. **78**, 41

Cyclotron Line Formation by Resonant Compton-cyclotron Scattering in Hercules-XI

Bonazzola, S., Heyvaerts, J., Puget, J.L. **78**, 53

Methan Line Profiles near 1.1 μ as a Probe of the Jupiter Cloud Structure and C/H Ratio

Buriez, J.C., de Bergh, C. **83**, 149

A New Model for Scattering by Irregular Absorbing Particles

Chiappetta, P. **83**, 348

Resonance-line Polarization. V. Quantum-mechanical Interference between States of Different Total Angular Momentum

Stenflo, J.O. **84**, 68

Electron Impact Excitation Cross Sections for O III

Ganas, P.S. **85**, 267; **40**, 259

Monte Carlo Analysis of Polarization by Thomson Scattering in Circumstellar Envelopes

Daniel, J.Y. **86**, 198

Compton Scattering Model for the γ -Ray Emission of NGC 4151

Pinkau, K. **87**, 192

Monte Carlo Analysis of Polarization by Mie Scattering in Circumstellar Envelopes

Daniel, J.-Y. **87**, 204

Electron Scattering in the Infalling Envelope of the Protostar S CrA

Stahl, O., Wolf, B. **90**, 338

A Comet Fragment Model for Zodiacal Light Particles

Greenberg, J.M., Gustafson, B.A.S. **93**, 35

Langmuir Scattering and High Velocity Features in Stellar Water Masers

Cohen, N.L., Hohlfield, R.G., Gorenstein, M.V., Potash, R.I., Willson, R.F. **95**, 386

Radiation Mode and Coronal Propagation of Solar Type III Radio Bursts Observed on 14 November 1971 During Stereo-1 Experiment

Poquérousse, M., Bougeret, J.L. **97**, 36

On the Stimulated Emission Terms in Partial Redistribution Calculations

Baschek, B., Mihalas, D., Oxenius, J. **97**, 43

Erratum: A Comet Fragment Model for Zodiacal Light Particles

Greenberg, J.M., Gustafson, B.A.S. **98**, 422

- About the Ergodicity Hypothesis in Random Propagation Studies
Bourgeois, G. **102**, 212
- Multiple Scattering of Solar Resonance Radiation in the Nearby Interstellar Medium. II
Keller, H.U., Richter, K., Thomas, G.E. **102**, 415
- On the Definition of Albedo and Application to Irregular Particles
Hanner, M.S., Giese, R.H., Weiss, K., Zerull, R. **104**, 42
- Double Transfer Process and the Spectrum of the Microwave Background
Danese, L., De Zotti, G. **107**, 39
- Upper Limits of a Cosmic Infrared Background Flux as Determined by X- and Gamma-ray Observations of M87
Schlickeiser, R., Harwit, M. **107**, 186
- The Hard X-ray Spectrum of Cygnus X-1
Steinle, H., Voges, W., Pietsch, W., Reppin, C., Trümper, J., Kendziorra, E., Staubert, R. **107**, 350
- Radiative Transfer: Analytic Solution of Difference Equations
Kalkofen, W., Wehrse, R. **108**, 42
- Apparent Thickness and Scattering Properties of Saturn's Rings from March 1980 Observations
Sicardy, B., Lecacheux, J., Laques, P., Despiiau, R., Auge, A. **108**, 296
- On the Phase Matrix Basic to the Scattering of Polarized Light
Siewert, C.E. **109**, 195
- Diffusion of Keplerian Motions by a Stochastic Force. I. A General Formalism
Barge, P., Pellat, R., Millet, J. **109**, 228
- Monte Carlo Study of Highly Polarized Cool Stars
Daniel, J.-Y. **111**, 58
- Diffusion of Keplerian Motions by a Stochastic Force. II. Lorentz Scattering of Interplanetary Dust
Barge, P., Pellat, R., Millet, J. **115**, 8
- A Scattering Model for the Zodiacal Light Particles
Schiffer, R., Thielheim, K.O. **116**, 1
- A search for optical polarization of the Milky Way at $l = 150^\circ$ and $l = 223^\circ$
Leinert, C., Richter, I. **121**, 146
- Coherent scattering in the solar spectrum: survey of linear polarization in the range 3165-4230 Å
Stenflo, J.O., Twerenbold, D., Harvey, J.W. **121**, 164; **52**, 161
- Diffuse light near Zeta Orionis and the Horsehead nebula, and anomalous extinction of HD 37903, as measured with the ANS
de Boer, K.S. **125**, 258
- Optical properties of interplanetary dust: comparison with light scattering by larger meteoritic and terrestrial grains
Weiss-Wrana, K. **126**, 240
- Efficient methods to calculate Chandrasekhar's H -functions
Bosma, P.B., de Rooij, W.A. **126**, 283
- Scintillation**
- On a Day-time Ionospheric Effect on some Radio Intensity Measurements and Interferometry
Meyer-Vernet, N. **84**, 142
- Some Effects Produced by the Ionosphere on Radio Interferometry: Fluctuations in Apparent Source Position and Image Distortion
Bougeret, J.L. **96**, 259
- Dynamic Spectra of Some Terrestrial Ionospheric Effects at Decametric Wavelengths. Applications in Other Astrophysical Contexts
Meyer-Vernet, N., Daigne, G., Lecacheux, A. **96**, 296
- Interplanetary Scintillation and Jovian DAM Emission
Genova, F., Leblanc, Y. **98**, 133
- About the Ergodicity Hypothesis in Random Propagation Studies
Bourgeois, G. **102**, 212
- On the Observability of Gravitational Scintillation
Hameury, J.M., Perault, M., Bonazzola, S., Puget, J.L. **103**, 63
- Solar Wind Motion within 30 R : Spacecraft Radio Scintillation Observations
Armstrong, J.W., Woo, R. **103**, 415
- Modulations in Jovian Decametric Spectra: Propagation Effects in Terrestrial Ionosphere and Jovian Environment
Genova, F., Aubier, M.G., Lecacheux, A. **104**, 229
- Solar Site-testing Campaign of JOSO on the Canary Islands in 1979
Brandt, P.N., Wöhl, H. **109**, 77
- Causal Relationship Between Pulsar Long-term Intensity Variations and the Interstellar Medium
Sieber, W. **113**, 311
- The processing of infrared sky noise by chopping, nodding and filtering
Papoular, R. **117**, 46
- A study of a correlation tracking method to improve imaging quality of ground-based solar telescopes
von der Lihé, O. **119**, 85
- Plasma effects on Doppler measurements of interplanetary spacecraft. I. Discontinuities and waves
Iess, L., Dobrowolny, M., Bertotti, B. **121**, 203
- The velocity and the density spectrum of the solar wind from simultaneous three-frequency IPS observations
Scott, S.L., Rickett, B.J., Armstrong, J.W. **123**, 191
- Solar wind observations near the Sun using interplanetary scintillation
Scott, S.L., Coles, W.A., Bourgeois, G. **123**, 207
- Seeing**, see also Earth Atmosphere
- Solar Seeing and the Statistical Properties of the Photospheric Solar Granulation. III. Solar Speckle Interferometry
Ricort, G., Aime, C. **76**, 324
- Turbulence around a Solar Telescope as Deduced from Angle of Arrival Statistics. A Comparison with Microthermal Measurements
Borghino, J., Azouit, M., Barletti, R., Ceppatelli, G., Paternò, L., Righini, A., Speroni, N., Vernin, J. **79**, 184
- The Effects of Seeing on the Reflected Spectrum of Uranus and Neptune
Münch, G., Hippelein, H. **81**, 189
- About the Ergodicity Hypothesis in Random Propagation Studies
Bourgeois, G. **102**, 212
- The Analysis of Solar Limb Observations. I. Restoration of Data in a Tilted Reference Frame
Wiesmeier, A., Durrant, C.J. **104**, 207
- Lower Atmosphere and Solar Seeing: an Experiment of Simultaneous Measurements of Nearby Turbulence by Thermal Radiosondes, by Angle of Arrival Statistics and Image Motion Observation
Borghino, J., Ceppatelli, G., Ricort, G., Righini, A. **107**, 333
- Solar Site-testing Campaign of JOSO on the Canary Islands in 1979
Brandt, P.N., Wöhl, H. **109**, 77
- Interferometric Measurements of Stellar Positions in the Infrared
Sutton, E.C., Subramanian, S., Townes, C.H. **110**, 324
- Seeing-independent Definitions of the Solar Limb Position
Brown, T.M. **116**, 260

The influence of seeing on the observation of short period fluctuations in the solar atmosphere

Endler, F., Deubner, F.-L. **121**, 291

Selected Areas

Extension of Two *UBV* Magnitude Sequences in the Selected Areas 82 and 107 by Electronography

Purgathofer, A. **73**, 365; **36**, 79

UBV Photoelectric Measurements of O-B Stars in SA 98

Lunel, M., Garnier, R. **81**, 387; **39**, 7

High Angular Resolution *uvby β* Observations of Stars Earlier than GO in the Intermediate and Low Latitude Areas SA 128 and SA 156

Knude, J. **111**, 210; **49**, 69

Semidetached Systems, see Close Binaries

Semiregular Variables, see Variables

On the Space Distribution of Semi-Regular Variables

Aslan, Z. **90**, 355

Seyfert Galaxies, see also Markarian Galaxies

Evidence for a Massive X-ray Halo around Markarian 541

Cash, W., Charles, P., Bowyer, S. **72**, L6

Formation of Permitted Lines in the Spectrum of Type I Seyfert Galaxies and Quasars Fe II Lines. Preliminary Discussion

Collin-Souffrin, S., Joly, M., Heidmann, N., Dumont, S. **72**, 293

The Optical Variability of Two Seyfert I Galaxies: Arakelian 120 and Markarian 231

Miller, H.R. **72**, 380; **35**, 387

Radio Emission from NGC 4319 and Markarian 205

Willis, A.G. **73**, 354

H I Observations of Active and Interacting Galaxies

Biermann, P., Clarke, J.N., Fricke, K.J. **75**, 19

ESO 103-G 35: A New Seyfert Galaxy and Possible X-ray Source

Phillips, M.M., Feldman, F.R., Marshall, F.E., Wamsteker, W. **76**, L14

Spectrophotometry of Six Seyfert Galaxies from the Zwicky Lists

Kunth, D., Sargent, W.L.W. **76**, 50

Morphology of Low-redshift Quasars and Related Objects. First Results Obtained by Electronography

Vanderriest, Ch., Schneider, J. **76**, 297

The Luminosity Function of Seyfert I Galaxy Nuclei and BL LAC Objects, and the X-ray Background

Véron, P. **78**, 46

Effect of Hard X-ray on the Emission Lines of Seyfert Galaxies and QSOs

Shields, G.A., Mushotzky, R.F. **79**, 56

A Search for CO in Markarian and Seyfert Galaxies

Wilson, T.L., Fricke, K.J., Biermann, P. **79**, 245

Spectroscopic and Multiaperture Photometric Observations of ESO 113-IG 45 (= Fairall 9)

Griersmith, D., Visvanathan, N. **79**, 329

High-resolution Profile of the [O III] Lines in NGC 1068

Pelat, D., Alloin, D. **81**, 172

Charge Transfer Reactions in Some Astrophysical Situations

Péquignot, D. **81**, 356

Formation of Permitted Lines in the Spectrum of Type I Seyfert Galaxies and Quasars. II. Fe II Lines and the Low Excitation Region

Collin-Souffrin, S., Dumont, S., Heidmann, N., Joly, M. **83**, 190

Compton Scattering Model for the γ -Ray Emission of NGC 4151

Pinkau, K. **87**, 192

On the Nature of the So-called Narrow-line X-ray Galaxies

Véron, P., Lindblad, P.O., Zuiderwijk, E.J., Véron, M.P., Adam, G. **87**, 245

The Velocity Field of the Seyfert Galaxy NGC 7469

Westin, B.A.M. **89**, L11

The Penrose Photoproduction Scenario for NGC 4151; (PCS-SSC). A Black Hole γ -ray Emission Mechanism for Active Galactic Nuclei and Seyfert Galaxies

Leiter, D. **89**, 370

High-energy X-ray Observations of Extragalactic Objects

Pietsch, W., Reppin, C., Trümper, J., Voges, W., Lewin, W., Kendziorra, E., Staubert, R. **94**, 234

Bi-Dimensional H α Photometry Over the Nuclear Region of NGC 1068

Alloin, D., Laques, P., Pelat, D., Despiauw, R. **95**, 394; **43**, 231

VBLUW Photometry of the Seyfert Galaxy NGC 1566

van Genderen, A.M., Meurs, E.J.A. **96**, 78

How to Find a Seyfert Nucleus Hidden by a Normal H II Region

Véron, P., Véron, M.P., Bergeron, J., Zuiderwijk, E.J. **97**, 71

High-resolution Spectrophotometry of the "Low-excitation" X-ray Galaxies NGC 1672 and NGC 6221

Véron, M.P., Véron, P., Zuiderwijk, E.J. **98**, 34

On the Width and Profile of Nuclear Emission Lines in Galaxies

Véron, M.P. **100**, 12

The Mild Abundance Gradient of NGC 1365

Alloin, D., Edmunds, M.G., Lindblad, P.O., Pagel, B.E.J. **101**, 377

A 1415 MHz Survey of Seyfert and Related Galaxies - II

Meurs, E.J.A., Wilson, A.S. **101**, 419; **45**, 99

Formation and Transfer of Permitted Si II Emission Lines in Seyfert I Galaxies and Quasars

Dumont, A.M., Mathez, G. **102**, 1

Variability of the Continuum and the Emission Lines in the Seyfert I Galaxy Akn 120

Kollatschny, W., Fricke, K.J., Schleicher, H., Yorke, H.W. **102**, L23

NGC 4507: A Weak Seyfert I and X-ray Galaxy

Véron, P., Véron, M.P., Zuiderwijk, E.J. **102**, 116

The Fe II Spectrum of Seyfert I Galaxies and Quasars

Joly, M. **102**, 321

Variations in the Spectrum of the Seyfert Galaxy Ak 120

Schulz, H., Rafanelli, P. **103**, 216

The Line Spectrum of Fe II Seyfert I Galaxy Akn 120

Kollatschny, W., Schleicher, H., Fricke, K.J., Yorke, H.W. **104**, 198

The Geometry of the Seyfert Nucleus in NGC 4151 Revisited. I. Cloudy Structure from the [O III] Line Profile Analysis

Pelat, D., Alloin, D. **105**, 335

Hydrogen Line Spectrum in Quasars. II. A Critical Discussion of Model Calculations for the Broad Line Region

Collin-Souffrin, S., Dumont, S., Tully, J. **106**, 362

Mid-infrared Observations of Seyfert I and Narrow-line X-ray Galaxies

Glass, I.S., Moorwood, A.F.M., Eichendorf, W. **107**, 276

The Radio Structure of the Nuclear Region of NGC 1365

Sandqvist, A., Jörsäter, S., Lindblad, P.O. **110**, 336

Radio and X-ray Galaxies in Abell 566

Harris, D.E., Robertson, J.G., Dewdney, P.E., Costain, C.H. **111**, 299

Forbidden Emission Lines of Fe VII

Nussbaumer, H., Storey, P.J. **113**, 21

The Detection of Extranuclear Emission Lines in the Seyfert Galaxies Mk 10 and Mk 79

Schulz, H. **115**, 209

A 1415 MHz Survey of Seyfert and Related Galaxies. III

Wilson, A.S., Meurs, E.J.A. **115**, 217; **50**, 217

Observations of emission line galaxies. I. The Seyfert-1 galaxies Mkn 1040, Mkn 1044

Rafanelli, P., Schulz, H. **117**, 109

The composite UV emission spectrum of Seyfert 1 galaxies

Véron-Cetty, M.-P., Véron, P., Tarengi, M. **119**, 69

Nuclear activity in the barred spiral galaxy NGC 3660 from radio, optical, and X-ray observations

Kollatschny, W., Biermann, P., Fricke, K.J., Huchtmeier, W., Witzel, A. **119**, 80

An interpretation of the low energy γ -ray emission from Seyfert nuclei in terms of annihilation radiation from a hot plasma

Bassani, L., Dean, A.J. **122**, 83

The [OIII] electron temperature and density structure in the nucleus of NGC 1068

Walsh, J.R. **123**, 101

ESO 438-G 9: a Seyfert galaxy with unusual properties

Kollatschny, W., Fricke, K.J. **125**, 276

Accretion disks in Seyfert nuclei: broad line profiles and asymmetries

van Groningen, E. **126**, 363

The compact radio core of Mkn 348: evidence for directed outflow in a type 2 Seyfert galaxy

Neff, S.G., de Bruyn, A.G. **128**, 318

Shell Stars, see also Be Stars, Circumstellar Matter

New Photoelectric Observations of the Shell Star α And

Guerrero, G., Mantegazza, L. **75**, 262; **36**, 471

The Shell Star HD 51480

Welin, G. **79**, 334

Absolute Ultraviolet Spectrophotometry with the TD-1 Satellite. XI. Spectrophotometric Study of Be and Shell Stars with the S 2/68 Experiment

Beeckmans, F., Hubert-Delplace, A.M. **86**, 72

An Atlas of the Shell Spectrum of Pleione Between 3167 Å and 4924 Å

Ballereau, D. **89**, 251; **41**, 305

The Variable Shell Star HR 5999: V. The Spectral Energy Distribution

Thé, P.S., Tjin a Djie, H.R.E., Bakker, R., Bastiaansen, P.A., Burger, M., Cassatella, A., Fredga, K., Gahm, G., Liseau, R., Smyth, M.J. **100**, 334; **44**, 451

[NiII] Emission Under Nebular Conditions

Nussbaumer, H., Storey, P.J. **110**, 295

Properties and Nature of Be and Shell Stars. 7B.88 Her - An Important Clue to Understanding the Be Phenomenon?

Doazan, V., Harmanec, P., Koubsky, P., Krpata, J., Zdarsky, F. **115**, 138

Properties and nature of Be and shell stars. 7A.88 Her: observational data, their reduction and basic evaluation

Doazan, V., Harmanec, P., Koubsky, P., Krpata, J., Zdarsky, F. **117**, 172; **50**, 481

Shock Waves

On the Theory of Shock-heated Atmospheres. II. The Influence of the Chromospheric Boundary-layer Structure on the Solar Wind

Couturier, P., Mangeney, A., Souffrin, P. **74**, 9

The Iron Abundance in Herbig-Haro Objects and Some New Data on H-H 2H

Böhm, K.H., Brugel, E.W. **74**, 297

On the Structure of Shock Waves. The First Stages

Cantó, J., Dyson, J.E. **76**, 318

Numerical Solutions of the Trans-relativistic Shock Relations

Fujimura, F.S., Kennel, C.F. **79**, 299

On the Origin of High-velocity Gas H_{α} -emission from the Cygnus Loop and IC 443

Bychkov, K.V., Lebedev, V.S. **80**, 167

Stellar Collapse: Adiabatic Hydrodynamics and Shock Wave Propagation

Müller, E., Rózycka, M., Hillebrandt, W. **81**, 288

Analytical Results for Interstellar Shocks

Elitzur, M. **81**, 351

Stellar Collapse: Adiabatic Hydrodynamics and Shock Wave Propagation

Müller, E., Rózycka, M., Hillebrandt, W. **82**, 288

CH Observations of Three Bright Rimmed Molecular Clouds

Sandell, G., Höglund, B., Friberg, P. **83**, 226

Particle Acceleration by Shock Waves in Solar Flares

Achterberg, A., Norman, C.A. **89**, 353

Numerical Solution of the 1 D Spherical Non Stationary Radiating Shock Using Characteristics. Application to Protostars

Morel, P.J., Baglin, A. **90**, 327

Solar Emission Lines Produced in the Wake of a Shock Wave. I. The Thermodynamic Cycle

Flower, D.R., Pineau des Forêts, G. **93**, 347

Late-stage Evolution of a Supernova Remnant. The Structure of the Dense Shell

Preite-Martinez, A. **96**, 283

Collisionless Perpendicular Shocks: Applications to Solar Type II Radio Bursts and the Antares (α Sco) B Radio Emission

Klinkhamer, F.R., Kuipers, J. **100**, 291

Gravitationally Driven Instabilities in Shock Compressed Gas Layers

Welter, G.L. **105**, 237

Profile Variations of the Si III (4452 and 4568) Lines and Mg II (4481) Doublet in γ Peg

Le Contel, J.-M., Morel, P.-J. **107**, 406

On the Theory of Shock-heated Atmospheres. III. Discussion of the Formalism and Application to Stellar Coronae

Souffrin, P. **109**, 205

Westerbork Observations of H I Absorption in the Direction of Sgr A

Schwarz, U.J., Ekers, R.D., Goss, W.M. **110**, 100

Solar Emission Lines Produced in the Wake of a Shock Wave. II. Line Profiles

Flower, D.R., Pineau des Forêts, G. **110**, 163

Preinjection of Cosmic Rays and Magnetic Chemically Peculiar Stars

Havnes, O. **110**, 203

X-ray and UV-emission from Supernova Shock Waves in Stellar Winds

Fransson, C. **111**, 140

The Structure of Cosmic Ray Shocks

Axford, W.I., Leer, E., McKenzie, J.F. **111**, 317

Shock Fronts in Wide Binary Systems

Huang, R.Q., Weigert, A. **112**, 281

Shock Induced Star Formation: The Effects of Magnetic Fields and Turbulence

Welter, G.L., Nepveu, M. **113**, 277

Non-linear Theory of Cosmic Ray Shocks Including Self-generated Alfvén Waves

McKenzie, J.F., Völk, H.J. **116**, 191

Shock Fronts Produced by Stellar Winds in the Interstellar Gas

Huang, R.Q., Weigert, A. **116**, 348

Cosmic-ray shock acceleration in the presence of self-excited waves

Lagage, P.O., Cesarsky, C.J. **118**, 223

Modification of scattering waves and its importance for shock acceleration

Achterberg, A. **119**, 274

The dissipation of shock waves in the outer solar atmosphere: a reappraisal

Flower, D.R., Pineau des Forêts, G. **119**, 321

The excitation of type II radio bursts in the corona

Wagner, W.J., MacQueen, R.M. **120**, 136

Onion-shell model of cosmic ray acceleration in supernova remnants

Bogdan, T.J., Völk, H.J. **122**, 129

Boundary conditions for energetic particle transport at shocks

Webb, G.M. **124**, 163

The maximum energy of cosmic rays accelerated by supernova shocks

Lagage, P.O., Cesarsky, C.J. **125**, 249

Composite models for the narrow emission line region of active galactic nuclei. I. The infalling filament

Contini, M., Aldrovandi, S.M.V. **127**, 15

On radiative shocks in atomic and molecular stellar atmospheres. I. Dominant physical phenomena

Gillet, D., Lafon, J.-P.J. **128**, 53

The shock-induced variability of the H α emission profile in Mira

Gillet, D., Maurice, E., Baade, D. **128**, 384

Silicon Stars, see Peculiar A Stars

Site Testing

Lower Atmosphere and Solar Seeing: an Experiment of Simultaneous Measurements of Nearby Turbulence by Thermal Radiosondes, by Angle of Arrival Statistics and Image Motion Observation

Borgnino, J., Ceppatelli, G., Ricort, G., Righini, A. **107**, 333

Solar Site-testing Campaign of JOSO on the Canary Islands in 1979

Brandt, P.N., Wöhl, H. **109**, 77

Sky Background, see Background Radiation, Earth Atmosphere

RGU Three-colour Photometry of a Field in Norma (Norma III)

Kandemir, G. **95**, 394; **43**, 239

Solar Wind

Solar Wind Latitudinal Variations Deduced from Mariner 10: Interplanetary H (1216 Å) Observations

Witt, N., Ajello, J.M., Blum, P.W. **73**, 272

On the Theory of Shock-heated Atmospheres. II. The Influence of the Chromospheric Boundary-layer Structure on the Solar Wind

Couturier, P., Mangeney, A., Souffrin, P. **74**, 9

On the Disruption of a Protoplanetary Disk Nebula by a T Tauri Like Solar Wind

Elmegreen, B.G. **80**, 77

Properties of Magnetohydrodynamic Turbulence in the Solar Wind

Dobrowolny, M., Mangeney, A., Veltri, P. **83**, 26

Lyman Alpha Albedo of Jupiter and Solar Activity

Vidal-Madjar, A., Emerich, C., Cazes, S. **87**, L12

Enhanced Interaction of the Solar Wind and the Interstellar Neutral Gas by Virtue of a Critical Velocity Effect

Petelski, E.F., Fahr, H.J., Ripken, H.W., Brenning, N., Axnäs, I. **87**, 20

Non-linear Interaction of Alfvén Waves with Compressive Fast Magnetosonic Waves

Lacombe, C., Mangeney, A. **88**, 277

On the Electrostatic Potential of Interplanetary Grains: Influence of the Thermoionic Effect

Millet, J., Lafon, J.P.L., Lamy, Ph.L. **92**, 6

Cometary Atmospheres. I. Solar Wind Modification of the Outer Ion Coma

Ip, W.-H. **92**, 95

On the Heliocentric Distance Dependence of Plasmon Emission in Type III Bursts

de Genouillac, G.V., Escande, D.F. **94**, 219

Polar Solar Wind and Interstellar Wind Properties from Interplanetary Lyman- α Radiation Measurements

Witt, N., Ajello, J.M., Blum, P.W. **95**, 80

Possible Slowdown of the Plasma Wave Sources Associated with Type III Radio Bursts

de Genouillac, G.V., Escande, D.F. **99**, L18

Erratum: Possible Slowdown of the Plasma Wave Sources Associated with Type III Radio Bursts

de Genouillac, G.V., Escande, D.F. **101**, 276

Plasma - Dust Interactions in the Solar Vicinity and their Observational Consequences

Fahr, H.J., Ripken, H.W., Lay, G. **102**, 359

Solar Wind Motion within 30 R : Spacecraft Radio Scintillation Observations

Armstrong, J.W., Woo, R. **103**, 415

Alfvénic Fluctuations as Asymptotic States of MHD Turbulence

Grappin, R., Frisch, U., Leorat, J., Pouquet, A. **105**, 6

Solar Wind Pressure on Interplanetary Dust

Mukai, T., Yamamoto, T. **107**, 97

The Influence of Divergent Geometries on Stellar Winds

Kuin, N.P.M., Hearn, A.G. **114**, 303

Plasma effects on Doppler measurements of interplanetary spacecraft. I. Discontinuities and waves

Iess, L., Dobrowolny, M., Bertotti, B. **121**, 203

Interpretation of the event in the plasma tail of comet Bradfield 1979 X on 1980 February 6

Le Borgne, J.F. **123**, 25

Physical and chemical effects induced by energetic ions on comets

Strazzulla, G., Pirronello, V., Foti, G. **123**, 93

The velocity and the density spectrum of the solar wind from simultaneous three-frequency IPS observations

Scott, S.L., Rickett, B.J., Armstrong, J.W. **123**, 191

Solar wind observations near the Sun using interplanetary scintillation

Scott, S.L., Coles, W.A., Bourgois, G. **123**, 207

A determination of the electron density fluctuation spectrum in the solar wind, using the ISEE propagation experiment

Celnikier, L.M., Harvey, C.C., Jegou, R., Kemp, M., Moricet, P. **126**, 293

Solar Activity, see also Bursts, Filaments, Solar Flares, Solar Prominences

Magnetic Buoyancy Revisited: Analytical and Numerical Results for Rising Flux Tubes

Schüßler, M. **71**, 79

- Non-linear Dynamo Theory: Finite Amplitude Magnetic Fields with Large Scale Circulation in a Compressible Stratified Medium
Schüßler, M. **72**, 348
- Solar Activity Cycle during Classical Antiquity
Stothers, R. **77**, 121
- EUUV Limb Spectra of a Surge Observed from Skylab
Doschek, G.A., Feldman, U., Mason, H.E. **78**, 342
- Microwave, EUV, and X-ray Observations of Active Region Loops Evidence for Gyroresonance Absorption in the Corona
Kundu, M.R., Schmahl, E.J., Gerassimenko, M. **82**, 265
- Dynamo Action of a Mean Flow Caused by Latitude-dependent Heat Transport
Belvedere, G., Paternò, L., Stix, M. **86**, 40
- The Energy Balance of the Solar Transition Region
Jordan, C. **86**, 355
- Variability of the Far-Infrared Solar Temperature Minimum with the Solar Cycle
Müller, E.A., Kneubühl, F.K., Rast, J., Stettler, P. **87**, L3
- Lyman Alpha Albedo of Jupiter and Solar Activity
Vidal-Madjar, A., Emerich, C., Cazes, S. **87**, L12
- Erratum:* Microwave, EUV, and X-ray Observations of Active Region Loops: Evidence for Gyroresonance Absorption in the Corona
Kundu, M.R., Schmahl, E.J., Gerassimenko, M. **91**, 377
- Comment on "Variability of the Far-infrared Solar Temperature Minimum with the Solar Cycle"
Cook, J.W., Brueckner, G.E., VanHoosier, M.E. **92**, L7
- The Distribution of Maximum Temperatures of Coronal Active Region Loops
Teske, R.G., Mayfield, E.B. **93**, 228
- The Solar Torsional Oscillation and Dynamo Models of the Solar Cycle
Schüssler, M. **94**, L17
- VLA Observations of Solar Active Regions at 6 cm Wavelength
Kundu, M.R., Schmahl, E.J., Rao, A.P. **94**, 72
- Latitudinal Anisotropy of the Solar Far Ultraviolet Flux: Effect on the $L\alpha$ Sky Background
Cook, J.W., Meier, R.R., Brueckner, G.E., Van Hoosier, M.E. **97**, 394
- X-ray, EUV, and Centimetric Observations of Solar Active Regions: an Empirical Model for Bright Radio Sources
Pallavicini, R., Sakurai, T., Vaiana, G.S. **98**, 316
- Solar Activity and Earth's Rotation
Djurović, D. **100**, 156
- Thermal Radio Emission of Solar Active Regions Derived from Quantitative Analysis of Skylab X-ray Pictures and Compared with Observation
Elwert, G., Villing, W., Vorpahl, J., Broussard, R.M. **101**, 150
- Stability of Toroidal Flux Tubes in Stars
Spruit, H.C., van Ballegooijen, A.A. **106**, 58
- About the Relation Between Radio and Soft X-ray Emission in Case of Very Weak Solar Activity
Fürst, E., Benz, A.O., Hirth, W. **107**, 178
- Active Picture of Rotation
Ando, H. **108**, 7
- Blowing up of Two-dimensional Magnetohydrostatic Equilibria by an Increase of Electric Current or Pressure
Heyvaerts, J., Lasry, J.M., Schatzman, M., Witomsky, P. **111**, 104
- Comparison Between Two Trigonometric Models for the Long-period Variations in the Wolf Numbers and in the Length of Day
Picchio, G. **111**, 326
- Erratum:* Stability of Toroidal Flux Tubes in Stars
Spruit, H.C., van Ballegooijen, A.A. **113**, 350
- A Comparative Spectral Analysis of the Earth's Rotation and the Solar Activity
Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **114**, 388
- Short-period geomagnetic, atmospheric and Earth-rotation variations
Djurović, D. **118**, 26
- Does the solar activity cycle extend over more than an 11-year period?
Leroy, J.-L., Noëns, J.-C. **120**, L1
- Rise times of horizontal magnetic flux tubes in the convection zone of the Sun
Moreno-Insertis, F. **122**, 241
- The Ca II K emission from the Sun as a star. II. The plage emission profile
Oranje, B.J. **124**, 43
- The Sun at 1.4 GHz: intensity and polarization
Dulk, G.A., Gary, D.E. **124**, 103
- The circularly polarized Sun at 12.6 cm wavelength
Lang, K.R., Willson, R.F. **127**, 135
- Spatial energy spectra of the velocity and magnetic fields in solar active regions
Berton, R. **127**, 140
- Dynamics of a surge observed in the C IV and H alpha lines
Schmieder, B., Vial, J.-C., Mein, P., Tandberg-Hanssen, E. **127**, 337
- Solar Atmosphere**, see also Oscillations, Pulsations, Solar Chromosphere, ... Corona, ... Granulation, ... Photosphere
- Hydromagnetic Wave Modes in Magnetic Flux Tubes
Wilson, P.R. **71**, 9
- Concentration of Axisymmetric Magnetic Flux by Rotational Shearing Motions
Nakagawa, Y., Stenflo, J.O. **72**, 67
- Evidence for a Lower Limit of Solar Magnetic Field Strengths
Wiehr, E. **73**, L19
- Four UV Observations of the Interstellar Wind by Mariner 10: Analysis with Spherically Symmetric Solar Radiation Models
Ajello, J.M., Witt, N., Blum, P.W. **73**, 260
- Solar Continuum Data on Absolute Intensities, Center to Limb Variations and Laplace Inversion between 1400 and 2100 Å
Samain, D. **74**, 225
- New Atomic Data for O^{+2}
Bhatia, A.K., Doschek, G.A., Feldman, U. **76**, 359
- Variability of the Far-Infrared Solar Temperature Minimum with the Solar Cycle
Müller, E.A., Kneubühl, F.K., Rast, J., Stettler, P. **87**, L3
- Upper Limits on the Power in Solar Oscillations at 1.2 mm, 9 mm, 3.7 cm, and 11.1 cm Wavelengths
Kundu, M.R., Schmahl, E.J. **90**, 192
- Absolute Fluxes, Equivalent Width and Centre-to-limb Profiles of the Solar Mg II Resonance Lines (I)
Greve, A., McKeith, C.D. **90**, 224
- The Formation of the Mg II Resonance Line Wings in the Solar Atmosphere (II)
Greve, A. **90**, 231
- Detection of 160 min Solar Intensity Variations: Sampling Effect
Koutchmy, S., Koutchmy, O., Kotov, V.A. **90**, 372
- Small-scale Velocity Fields and Mean Line Profiles
Durrant, C.J. **91**, 251

Comment on "Variability of the Far-infrared Solar Temperature Minimum with the Solar Cycle"

Cook, J.W., Brueckner, G.E., VanHoosier, M.E. **92**, L7

High Resolution Interferometric Observations of the Solar Limb at 4.9 and 10.7 GHz During the Solar Eclipse of October, 1977

Marsh, K.A., Hurford, G.J., Zirin, H. **94**, 67

What can we Learn from Static Models of Coronal Loops?

Chiuderi, C., Einaudi, G., Toricelli-Campioni, G. **97**, 27

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. III. Alfvén Waves in the Solar Atmosphere

Leroy, B. **97**, 245

The Solar Structure and the Five-minute Oscillation

Scuflaire, R., Gabriel, M., Noels, A. **99**, 39

Solar Oscillations and Limb Darkening Fluctuations

Yerle, R. **100**, L23

Erratum: Solar Oscillations and Limb Darkening Fluctuations

Yerle, R. **103**, 428

An Attempt to Determine the Solar Ly α Flux Independently of Instrument Calibration

Cazes, S., Emerich, C., Vidal-Madjar, A., Meier, R.R. **104**, 10

The Solar Spectrum of O IV, Including Photoexcitation by Fe IX 171.07 Å

Kastner, S.O. **108**, 361

A Selective Solar Irradiance Spectrometer

Oranje, B.J. **109**, 32

Rocket Photographs of Fine Structure and Wave Patterns in the Solar Temperature Minimum

Bonnet, R.M., Bruner, M., Acton, L.W., Decaudin, M., Foing, B. **111**, 125

Transformation of Magnetogravitational Waves in the Solar Atmosphere

Zhugzhda, Y.D., Dzhalilov, N.S. **112**, 16

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. V. The Theory of Magneto-Acoustic-Gravity Oscillations

Leroy, B., Schwartz, S.J. **112**, 84

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. VI. Application of Magneto-Acoustic-Gravity Mode Theory to the Solar Atmosphere

Schwartz, S.J., Leroy, B. **112**, 93

Non-LTE Resonance Line Polarization with Partial Redistribution Effects

Rees, D.E., Saliba, G.J. **115**, 1

MHD wave motion in magnetically structured atmospheres

Rae, I.C., Roberts, B. **119**, 28

The electron density of faint prominences observed during the solar eclipse of July 31, 1981

Koutchmy, S., Lebecq, C., Stellmacher, G. **119**, 261

The influence of seeing on the observation of short period fluctuations in the solar atmosphere

Endler, F., Deubner, F.-L. **121**, 291

Magnesium II line formation: the contribution of high atomic levels to the resonance lines

Lemaire, P., Gouttebroze, P. **125**, 241

Propagation of Alfvén waves in an isothermal atmosphere when the displacement current is not neglected

Leroy, B. **125**, 371

The MHD Kelvin-Helmholtz instability in the solar photosphere

Rae, I.C. **126**, 209

The Sun among the stars. VII. The Hz profile of the Sun and the solar analog 16 Cygni B

Hardorp, J., Tomkin, J. **127**, 277

Solar Chromosphere, see also Solar Atmosphere, Solar Flares, Transition Zone

Steps Towards a Solar Network Model

Unno, W., Ribes, E. **73**, 314

Nonthermal Broadening of Extreme Ultraviolet Emission Lines near the Solar Limb

Mariska, J.T., Feldman, U., Doschek, G.A. **73**, 361

Waves in the Low Solar Chromosphere

Schmieder, B. **74**, 273

On the Absorption of Solar L α by Hot Interstellar Hydrogen

Meier, R.R. **79**, 277

A Model for Sunspot Associated Emission at 6 cm Wavelength

Alissandrakis, C.E., Kundu, M.R., Lantos, P. **82**, 30

Mechanical Flux in the Solar Chromosphere. I. Velocity and Temperature Weighting Functions for Ca II Lines

Mein, N., Mein, P. **84**, 96

Mechanical Flux in the Solar Chromosphere. II. Determination of the Mechanical Flux

Schmieder, B., Mein, N. **84**, 99

Microturbulence Near the Edge of a Solar Plage

Simon, G., Dumont, S., Mouradian, Z., Pecker, J.C., Artzner, G., Vial, J.C. **89**, L8

Acoustic Waves in the Solar Atmosphere. VI. Feautrier Type Radiation Treatment

Wolf, B.E., Schmitz, F., Ulmschneider, P. **97**, 101

Mechanical Flux in the Solar Chromosphere. III. Variation of the Mechanical Flux

Mein, N., Schmieder, B. **97**, 310

Motion of Magnetic Flux Tubes in the Solar Convection Zone and Chromosphere

Spruit, H.C. **98**, 155

A Unified Working Model for the Atmospheric Structure of Large Sunspot Umbrae

Staude, J. **100**, 284

Dynamics in the Filaments: I. Oscillations in a Quiescent Filament

Malherbe, J.M., Schmieder, B., Mein, P. **102**, 124

The Chromosphere Above Sunspot Umbrae. III. Spatial and Temporal Variations of Chromospheric Lines

Kneer, F., Mattig, W., v. Uexküll, M. **102**, 147

Physical Properties of the Solar Chromosphere Deduced from Optically Thick Lines. I. Observations, Data Reduction, and Modeling of an Average Plage

Lemaire, P., Gouttebroze, P., Vial, J.C., Artzner, G.E. **103**, 160

Heating of Stellar Chromospheres when Magnetic Fields are Present

Ulmschneider, P., Stein, R.F. **106**, 9

Detection of a 192 s Oscillatory Component on the Sun at 8.6 mm Wavelength

Bocchia, R. **106**, 79

On the Widths of the Ca II K Emission in Late-type Stars

Severino, G. **109**, 90

Mass Motions in the Solar Chromosphere and Transition Zone

Mein, P., Simon, G., Vial, J.C., Shine, R.A. **111**, 136

On Solar Hydrogen Lines in the Far-infrared and Submillimeter Spectrum

Hoang-Binh, D. **112**, L3

Modification of the Ionization Balance of the Upper Chromosphere Due to XUV Irradiation in Flares

Chambe, G. **113**, 31

- Dynamics of the Eruptive Prominence of 6 May 1980 and Its Relationship to the Coronal Transient
Mein, N., Schmieder, B., Simon, G., Tandberg-Hanssen, E., Wu, S.T. **114**, 192
- Electron Densities from the O IV λ 1401 Multiplet
Nussbaumer, H., Storey, P.J. **115**, 205
- Measurements of Solar Transition Zone Velocities and Line Broadening Using the Ultraviolet Spectrometer and Polarimeter on the Solar Maximum Mission
Simon, G., Mein, P., Vial, J.C., Shine, R.A., Woodgate, B.E. **115**, 367
- Brightness oscillations of the Sun's chromosphere in K and H α
Kneer, F., von Uexküll, M. **119**, 124
- Dynamics of solar filaments. II. Mass motions in an active region filament from H α center to limb observations
Malherbe, J.M., Schmieder, B., Ribes, E., Mein, P. **119**, 197
- Conductive flux in flaring solar chromospheres deduced from line linear polarization observations
Hénoux, J.C., Heristchi, D., Chambe, G., Machado, M., Woodgate, B., Shine, R., Beckers, J. **119**, 233
- Dynamical behaviour of surges
Banos, G., Daras-Papamargaritis, H. **120**, 181
- The Ca II K emission from the Sun as a star. I. Observational parameters
Oranje, B.J. **122**, 88
- The chromosphere above sunspot umbrae. IV. Frequency analysis of umbral oscillations
v. Uexküll, M., Kneer, F., Mattig, W. **123**, 263
- The Ca II K emission from the Sun as a star. II. The plage emission profile
Oranje, B.J. **124**, 43
- The O IV infrared and ultraviolet flux ratios as temperature and density diagnostics
Hayes, M.A., Nussbaumer, H. **124**, 279
- Magnesium II line formation: the contribution of high atomic levels to the resonance lines
Lemaire, P., Gouttebroze, P. **125**, 241
- Dynamics of a surge observed in the C IV and H α lines
Schmieder, B., Vial, J.-C., Mein, P., Tandberg-Hanssen, E. **127**, 337
- Solar Corona**, see also Bursts, Solar Atmosphere, Solar Radio Radiation, Stellar Coronae, Transition Zone
- Forbidden Transitions in the C I Sequence
Nussbaumer, H., Rusca, C. **72**, 129
- The Fluctuations of Flux from Limited Solar Areas at Radio Frequencies and Propagation of Waves in the Coronal Plasma
Butz, M., Hirth, W., Fürst, E. **72**, 211
- Polarization of the Green Line Observed at the 1973 June 30 Total Solar Eclipse
Picat, J.P., Felenbok, P., Fort, B. **75**, 176
- The Equilibrium of Solar Coronal Magnetic Loops
Hood, A.W., Priest, E.R. **77**, 233
- The Solar Oxygen Abundance
Meyer, A., Nussbaumer, H. **78**, 33
- A Theoretical Model of a Coronal Hole
Pineau des Forêts, G. **78**, 159
- The Interpretation of N IV and N VII Emission Line Ratios in the Sun
Dufton, P.L., Doyle, J.G., Kingston, A.E. **78**, 318
- Horizontal Temperature Gradient Measurements and the Condensation of a Solar Prominence
Mouradian, Z., Martres, M.-J., Soru-Escaut, I. **79**, 138
- The N III and O IV Intersystem Multiplets as Density Indicators for Solar Plasmas
Feldman, U., Doschek, G.A. **79**, 357
- The Physical Structure of Coronal Holes: Influence of Magnetic Fields and Coronal Heating
Pneuman, G.W. **81**, 161
- Microwave, EUV, and X-ray Observations of Active Region Loops Evidence for Gyroresonance Absorption in the Corona
Kundu, M.R., Schmahl, E.J., Gerassimenko, M. **82**, 265
- Plasma Flow along Sheared Magnetic Arches within the Solar Corona
Glencross, W.M. **83**, 65
- Atomic Data for Si IV and Solar Observations of the $3s^2 3p^2 P-3s 3p^2 ^4P$ Multiplet
Bhatia, A.K., Doschek, G.A., Feldman, U. **86**, 32
- Are Solar Coronal Loops in Thermal Equilibrium?
Hood, A.W., Priest, E.R. **87**, 126
- Two-dimensional Maps of the Sun at 408 MHz
Palagi, F., Patriarchi, P. **87**, 254; **41**, 129
- A Density Model for the North Polar Coronal Hole at the 1973 Eclipse
Crifo-Magnant, F., Picat, J.P. **88**, 97
- On the Physical Significance of White Light Polar Plumes in the Solar Corona
Sornette, B., Fort, B., Picat, J.P., Cailloux, M. **90**, 344
- Erratum:* Microwave, EUV, and X-ray Observations of Active Region Loops: Evidence for Gyroresonance Absorption in the Corona
Kundu, M.R., Schmahl, E.J., Gerassimenko, M. **91**, 377
- The Distribution of Maximum Temperatures of Coronal Active Region Loops
Teske, R.G., Mayfield, E.B. **93**, 228
- Coronal Evolution and Solar Type I Radio Bursts: An Ion-acoustic Wave Model
Benz, A.O., Wentzel, D.G. **94**, 100
- Multiple Critical Points in Stellar Winds with Divergent Geometries
Kuin, N.P.M. **96**, 325
- What can we Learn from Static Models of Coronal Loops?
Chiuderi, C., Einaudi, G., Toricelli-Campioni, G. **97**, 27
- Radiation Mode and Coronal Propagation of Solar Type III Radio Bursts Observed on 14 November 1971 During Stereo-1 Experiment
Poquérousse, M., Bougeret, J.L. **97**, 36
- The Stability of Solar Coronal Loops with Realistic Photospheric Boundary Conditions
Van Hoven, G., Ma, S.S., Einaudi, G. **97**, 232
- Mechanical Flux in the Solar Chromosphere. III. Variation of the Mechanical Flux
Mein, N., Schmieder, B. **97**, 310
- Forbidden Lines in Hot Astronomical Sources
Eidelsberg, M., Crifo-Magnant, F., Zeippen, C.J. **97**, 417; **43**, 455
- Models for Stellar Coronae. Comparison with the Minimum Flux Corona Theory
Vardavas, I.M., Hearn, A.G. **98**, 241
- Models for Stellar Coronae. Differences Between Hydrostatic and Dynamic Models
Hearn, A.G., Vardavas, I.M. **98**, 246
- On the Computation of Constant α Force-free Magnetic Field
Alissandrakis, C.E. **100**, 197

- Relationship Between a Soft X-ray Long Duration Event and an Intense Metric Noise Storm
Lantos, P., Kerdran, A., Rapley, G.G., Bentley, R.D. **101**, 33
- An Analytical Model for Stellar Coronae
Martens, P.C.H. **102**, 156
- Coronal Loops in the Sun and in the Stars
Landini, M., Monsignor Fossi, B.C. **102**, 391
- Diagnostic of Coronal Heating Processes Based on the Emission Measure of UV Lines
Torricelli-Ciamponi, G., Einaudi, G., Chiuderi, C. **105**, L1
- On the Thermal Stability of Hot Coronal Loops: The Coupling Between Chromosphere and Corona
Kuin, N.P.M., Martens, P.C.H. **108**, L1
- Chromospheric Effects of XUV Radiation Emitted During Solar Flares
Machado, M.E., Hénoux, J.C. **108**, 61
- Solar Emission Lines Produced in the Wake of a Shock Wave. II. Line Profiles
Flower, D.R., Pineau des Forêts, G. **110**, 163
- A Diffuse Component of Solar Electron Streams as a Possible Source of Decametric and Hectometric Continuum
Levin, B.N. **111**, 71
- An Association Between Coronal Structures and Type III Burst Sources
Trottet, G., Pick, M., House, L., Illing, R., Sawyer, C., Wagner, W. **111**, 306
- Diagnostic of Coronal Magnetic Fields from Microwave Polarization Reversal
Bandiera, R. **112**, 52
- Two Colour Photometry and Polarimetry of the Solar Corona of 16 February 1980
Dürst, J. **112**, 241
- Observed Polarization of the Fe XIV 5303 Coronal Emission Line
Arnaud, J. **112**, 350
- On Cool Coronal Loops
Martens, P.C.H., Kuin, N.P.M. **112**, 366
- The Thermal Stability of Solar Coronal Loops in Hydrostatic Equilibrium
Wragg, M.A., Priest, E.R. **113**, 269
- Resonant Electrodynamic Heating and the Thermal Stability of Coronal Loops
Martens, P.C.H., Kuperus, M. **113**, 324
- Dynamics of the Eruptive Prominence of 6 May 1980 and Its Relationship to the Coronal Transient
Mein, N., Schmieder, B., Simon, G., Tandberg-Hanssen, E., Wu, S.T. **114**, 192
- The Influence of Divergent Geometries on Stellar Winds
Kuin, N.P.M., Hearn, A.G. **114**, 303
- Magnetic Field in Solar Prominences Measured with a New Spectrally Scanning Magnetograph
Kim, I.S., Koutchmy, S., Nikolsky, G.M., Stellmacher, G. **114**, 347
- Coronal Loop Transients in Streamer Configurations
Steinolfson, R.S. **115**, 39
- Coronal Response to a Solar Event in a Corona Evacuated by a Prior Transient
Steinolfson, R.S. **115**, 50
- Measurements of Solar Transition Zone Velocities and Line Broadening Using the Ultraviolet Spectrometer and Polarimeter on the Solar Maximum Mission
Simon, G., Mein, P., Vial, J.C., Shine, R.A., Woodgate, B.E. **115**, 367
- Visible Light Observations of a Dense Plasmoid Associated with a Moving Type IV Solar Radio Burst
Stewart, R.T., Dulk, G.A., Sheridan, K.V., House, L.L., Wagner, W.J., Sawyer, C., Illing, R., Wagner, W. **116**, 217
- Coronal Line Intensities for Ions with Fine-structured Ground States: Si x
Saha, H.P., Treffitz, E. **116**, 224
- The Analysis of Fe XIV 5303 Coronal Emission-line Polarization Measurements
Arnaud, J. **116**, 248
- Coronal heating by phase-mixed shear Alfvén waves
Heyvaerts, J., Priest, E.R. **117**, 220
- Dielectronic satellite spectra of Mg XI with inner-shell and helium-like excitation rates. Application to solar observations
Faucher, P., Loulgué, M., Steenman-Clark, L., Volonté, S. **118**, 147
- The dissipation of shock waves in the outer solar atmosphere: a reappraisal
Flower, D.R., Pineau des Forêts, G. **119**, 321
- Does the solar activity cycle extend over more than an 11-year period?
Leroy, J.-L., Noëns, J.-C. **120**, L1
- The excitation of type II radio bursts in the corona
Wagner, W.J., MacQueen, R.M. **120**, 136
- Short period coronal oscillations: observation and interpretation
Koutchmy, S., Žugžda, Y.D., Locans, V. **120**, 185
- The thermal evolution of resonantly heated coronal loops
Martens, P.C.H., Kuin, N.P.M. **123**, 216
- Solar-type U bursts and coronal transients
Leblanc, Y., Poquérousse, M., Aubier, M.G. **123**, 307
- The Sun at 1.4 GHz: intensity and polarization
Dulk, G.A., Gary, D.E. **124**, 103
- A spectroscopic method for calibration of solar extreme ultraviolet instrumentation
Neupert, W.M., Kastner, S.O. **128**, 181
- Solar Cycle**, see Solar Activity
- Solar rotation 1947-1981 - determined from sunspot data
Lustig, G. **125**, 355
- Solar Eclipses**
- Determination of the Ephemeris Time Correction from Photographic Observations of the Annular Eclipse of the Sun on April 29, 1976
Schroll, A., Lustig, G. **73**, 193
- Polarization of the Green Line Observed at the 1973 June 30 Total Solar Eclipse
Picat, J.P., Felenbok, P., Fort, B. **75**, 176
- High Resolution Interferometric Observations of the Solar Limb at 4.9 and 10.7 GHz During the Solar Eclipse of October, 1977
Marsh, K.A., Hurford, G.J., Zirin, H. **94**, 67
- Solar Granulation Study in Partial Eclipse Conditions Using Speckle Interferometric Techniques
Ricort, G., Aime, C., Deubner, F., Mattig, W. **97**, 114
- Observation of the Extreme Solar Limb at 3.9 μm During the Partial Solar Eclipse of 10 July, 1972
Clark, T.A., Clay, R.W. **100**, 254
- Solar Evolution**, see Stellar Evolution, Sun
- Stability of a $1 M_{\odot}$ star with decreasing gravitational constant
Boury, A., Scuflaire, R., Noels, A., Gabriel, M. **119**, 253

Solar Flares

- Models of Temperature Distribution in an X-ray Solar Flare
Landini, M., Monsignori Fossi, B.C. **72**, 171
- Fe XXI as an Electron Density Diagnostic in Solar Flares
Mason, H.E., Doschek, G.A., Feldman, U., Bhatia, A.K. **73**, 74
- Physical Parameter Analysis of an Intense, Compact Subflare
Wilson, R.M., Smith, J.B., Speich, D.M. **74**, 129
- Physical Parameter Profiles of Selected X-ray Flares
Wilson, R.M., Smith, J.E. **77**, 372; **38**, 79
- Direct Excitation of Hydrogen by Photoelectron and Accelerated Electron Collisions in Solar Chromospheric Flares: Effects on the Profile and Polarization of Ly α
Chambe, G., Hénoux, J.-C. **80**, 123
- Principal Component Analysis of Solar Flares in the Soft X-ray Flux
Teuber, D.L., Reichmann, E.J., Wilson, R.M. **80**, 218
- A Class of Quasiperiodic Microwave Bursts as Evidence for Adiabatic Heating
Wiehl, H.J., Mätzler, C. **82**, 93
- Plasma Flow along Sheared Magnetic Arches within the Solar Corona
Glencross, W.M. **83**, 65
- New Atomic Data for Fe⁺¹⁹
Bhatia, A.K., Mason, H.E. **83**, 380
- Analysis of X-ray Line Spectra From a Transient Plasma Under Solar Flare Conditions. II. Rate Coefficients
Mewe, R., Schrijver, J., Sylwester, J. **86**, 268; **40**, 323
- Analysis of X-ray Line Spectra from a Transient Plasma Under Solar Flare Conditions. III. Diagnostics for Measuring Electron Temperature and Density
Sylwester, J., Mewe, R., Schrijver, J. **86**, 268; **40**, 335
- Observations of the O I 1355.6 Å and C I 1355.8 Å Lines in Solar Flares
Cheng, C.C., Feldman, U., Doschek, G.A. **86**, 377
- Evidence for Quasi-quantization of Solar Flare mm-Wave Radiation
Kaufmann, P., Strauss, F.M., Opher, R., Laporte, C. **87**, 58
- Analysis of X-ray Line Spectra from a Transient Plasma under Solar Flare Conditions. I. General Outline
Mewe, R., Schrijver, J. **87**, 261
- Particle Acceleration by Shock Waves in Solar Flares
Achterberg, A., Norman, C.A. **89**, 353
- Horizontal Distribution of the X-ray Energy Deposit in the Chromosphere and H α Two Ribbon Flares
Hénoux, J.C., Rust, D. **91**, 322
- Periodic Fluctuations in the Solar Millimeter Wave Burst Associated with the Solar Flare on September 22, 1978
Urpo, S., Tiuri, M., Tlamicha, A., Pračka, M., Karlický, M. **93**, 121
- What Produces the High Densities Observed in Solar Flare Plasmas?
Chung-Chieh Cheng, Feldman, U., Doschek, G.A. **97**, 210
- New Spectral Classifications for two Peculiar White Dwarfs
Wegner, G. **102**, 223
- Runaway Acceleration in a Radio Flare
Kuijpers, J., van der Post, P., Slottje, C. **103**, 331
- Analysis of the Optical Spectra of Solar Flares. I. The Flare of April 30, 1976
Acampa, E., Falciani, R., Sambuco, A.M., Smaldone, L.A. **107**, 414; **47**, 485
- Radio Imaging of Solar Flares Using the Very Large Array: New Insights into Flare Process
Kundu, M.R., Schmahl, E.J., Velusamy, T., Vlahos, L. **108**, 188
- Impulsive and Gradual Hard X-ray Sources in a Solar Flare
Vilmer, N., Kane, S.R., Trotter, G. **108**, 306
- Self-consistent models of flare heated solar chromospheres
Fang, C., Hénoux, J.C. **118**, 139
- Conductive flux in flaring solar chromospheres deduced from line linear polarization observations
Hénoux, J.C., Heristchi, D., Chambe, G., Machado, M., Woodgate, B., Shine, R., Beckers, J. **119**, 233
- The excitation of type II radio bursts in the corona
Wagner, W.J., MacQueen, R.M. **120**, 136
- Atomic calculations for Ca XVII; UV and X-ray lines
Bhatia, A.K., Mason, H.E. **121**, 163; **52**, 115
- Atomic calculations for the Fe XX X-ray lines
Mason, H.E., Bhatia, A.K. **121**, 164; **52**, 181
- V LBI of solar flares
Tapping, K.F., Kuijpers, J., Kaastra, J.S., van Nieuwkoop, J., Graham, D., Slottje, C. **122**, 177
- The final state of a solar flare
Norman, C.A., Heyvaerts, J. **124**, L1
- Mass and energy balance in the 1973 August 9 flare
Dere, K.P., Cook, J.W. **124**, 181
- Solar Granulation**
- The Supergranulation: Solar Rip Currents?
Cloutman, L.D. **74**, L1
- On the Center to Limb Variation of the Granular Brightness Fluctuations
Schmidt, W., Deubner, F.-L., Mattig, W., Mehltretter, J.P. **75**, 223
- Buoyant Magnetic Flux Tubes in Supergranules
Meyer, F., Simon, G.W., Weiss, N.O. **76**, 35
- Solar Seeing and the Statistical Properties of the Photospheric Solar Granulation. III. Solar Speckle Interferometry
Ricort, G., Aime, C. **76**, 324
- The Variation of the Mean Diameters of the Photospheric Granules near the Sunspots
Macris, C.J. **78**, 186
- Statistical Determination of a Morphological Parameter in Solar Granulation: Spatial Distribution of Granules
Aime, C., Martin, F., Grec, G., Roddier, P. **79**, 1
- The Mean Vertical Velocity of Solar Granulation
Mattig, W. **83**, 129
- Theoretical Network Structure of the Transition Region Chromosphere - Corona. I. The Quiet Sun
Elzner, L.R., Elwert, G. **86**, 181
- Theoretical Network Structure of the Transition Region Chromosphere - Corona. II. The Coronal Holes
Elzner, L.R., Elwert, G. **86**, 188
- The Solar Granulation: I. Two dimensional Power-spectrum Analysis Using Optical Data Processing Methods
Koutchmy, S., Legait, A. **88**, 345
- Vertical Structure of the Solar Photosphere
Durrant, C.J., Nesis, A. **95**, 221
- Solar Granulation: Influence on Convection of Spectral Line Asymmetries and Wavelength Shifts
Dravins, D., Lindegren, L., Nordlund, Å. **96**, 345
- Solar Granulation Study in Partial Eclipse Conditions Using Speckle Interferometric Techniques
Ricort, G., Aime, C., Deubner, F., Mattig, W. **97**, 114

Balloon-borne Imagery of the Solar Granulation. III. Digital Analysis of a White-light Time Series

Wittmann, A. **99**, 90

The Third Central Moment of Photospheric Lines as a Measure of Velocity Gradients and Line Shifts

Marmolino, C., Severino, G. **100**, 191

A Comparison of Optical and Digital Fourier Transformation of Solar Granulation

von der Lühe, O. **101**, 277

The Analysis of Solar Limb Observations. I. Restoration of Data in a Tilted Reference Frame

Wiesmeier, A., Durrant, C.J. **104**, 207

Numerical Simulations of the Solar Granulation. I. Basic Equations and Methods

Nordlund, Å. **107**, 1

On the Magnitude and the Height Dependence of the Granular Vertical Flow Velocity

Bässgen, M., Deubner, F.-L. **111**, L1

Rocket Photographs of Fine Structure and Wave Patterns in the Solar Temperature Minimum

Bonnet, R.M., Bruner, M., Acton, L.W., Decaudin, M., Foing, B. **111**, 125

Profiles and shifts of the C I 5052-Å line in the granulation spectrum

Namba, O., Hafkenscheid, G.A.M., Koyama, S. **117**, 277

A study of a correlation tracking method to improve imaging quality of ground-based solar telescopes

von der Lühe, O. **119**, 85

Balloon-borne imagery of the solar granulation. IV. The centre-to-limb variation of the intensity fluctuations

Durrant, C.J., Mattig, W., Nesis, A., Schmidt, W. **123**, 319

Solar Motion

The gradients of the velocity ellipsoid for nearby stars

Oblak, E. **123**, 238

Analysis of solar observations made with the CERGA astrolabe (Text in French)

Bougeard, M., Chollet, F., Laclare, F. **126**, 161

Solar Neighborhood

Interstellar Reddening in Clouds in the Solar Vicinity. Statistically Derived from Color Excesses of A and F Stars Confined to 63 Selected Areas

Knude, J. **71**, 344

Interstellar Reddening and Intercloud Density in the Solar Vicinity

Knude, J. **77**, 198

Relations between Galaxy Counts and H I Column Densities: An Interpretation of the Latitude Dependence Effect

Lebrun, F. **79**, 153

Multiple Scattering of Solar Resonance Radiation in the Nearby Interstellar Medium. I

Keller, H.U., Thomas, G.E. **80**, 227

A Catalogue of Low Mass Clouds in the Solar Vicinity, Results from a Photometric Survey of 84 Volumes

Knude, J. **80**, 331; **38**, 407

Nearby Star Data Published 1969-1978

Gliese, W., Jahreiss, H. **80**, 331; **38**, 423

Physical Parameters of Solar Neighbourhood Flare Stars

Pettersen, B.R. **82**, 53

Polarization Measurements of 313 Nearby Stars

Krautter, J. **82**, 393; **39**, 167

Observations of Interstellar Helium with a Gas Absorption Cell: Implications for the Structure of the Local Interstellar Medium

Freeman, J., Paresce, F., Bowyer, S., Lampton, M. **83**, 58

Interstellar Reddening in the Solar Neighbourhood

Spaenhauer, A.M. **83**, 234

Space Astrometry of Nearby Stars

Fracastoro, M.G. **84**, 266

The Use of Luyten's Magnitude Estimates in the Selection of Red Nearby Star Suspects from His Proper Motion Catalogues LHS and NLTT

Gliese, W., Jahreiss, H. **85**, 350

Dispersion Inhomogeneities of Nearby Stars Velocities Along the Direction $l=330^\circ$, $b=0^\circ$

Menge de Freitas, S. **89**, 253; **41**, 433

Comparison of Solar Backscatter and Interstellar Absorption Measurements of the ISM

Meier, R.R. **91**, 62

A Model for the H I Cloud Spectrum in the Solar Neighbourhood

Chièze, J.-P., Lazareff, B. **91**, 290

Duplicity in the Solar Neighborhood. I. A new Spectroscopic Orbit for BY Draconis

Lucke, P.B., Mayor, M. **92**, 182

Photometric Parallaxes for Nearby Stars

Hauck, B., Davis Philip, A.G. **95**, 393; **43**, 191

Absolute Magnitudes of Nearby Bright Stars

Shallis, M.J. **97**, 203

Theoretical Luminosity Functions of Red and Black Dwarfs

Staller, R.F.A., de Jong, T. **98**, 140

Kinematical and Chemical Evolution of the Galactic Disk near the Sun

Vader, J.P., de Jong, T. **100**, 124

The Colours, Magnitudes and Parallaxes of the Nearby Stars

Grenon, M., Rufener, F. **103**, 208; **46**, 25

The Lick Galaxy Counts, the Local Interstellar Absorption and Molecular Hydrogen

Strong, A.W., Lebrun, F. **105**, 159

Space Density of Stars and Interstellar Extinction near h and χ Persei (Perseus I)

Becker, W., Wooden II, W.H. **106**, 179; **46**, 347

COS-B Gamma-ray Measurements, Cosmic Rays and the Local Interstellar Medium

Lebrun, F., Bignami, G.F., Buccheri, R., Caraveo, P.A., Hermesen, W., Kanbach, G., Mayer-Hasselwander, H.A., Paul, J.A., Strong, A.W., Wills, R.D. **107**, 390

Photometric Parallaxes of Nearby Main-Sequence Stars with Annual Proper Motion of $0''.7$ or More Derived from Eggen's B, V and R, I Data

Gliese, W. **107**, 413; **47**, 471

High Order Momenta of the Local Stellar Velocity Distribution

Núñez, J., Torra, J. **110**, 95

On a Model of Local Gas Related to Gould's Belt

Olano, C.A. **112**, 195

An Odd Behavior of Nearby Stars Velocity Components in the Direction $l=330^\circ$, $b=0^\circ$

Menge de Freitas, S. **112**, 395; **49**, 687

Contribution to the Study of Composite Spectra. III. Spectrum Binaries: Intermediate Class Between Visual and Spectroscopic Binaries? (Text in French)

Carquillat, J.M., Nadal, R., Ginestet, N., Pedoussaut, A. **115**, 23

The Local Interstellar Medium as Traced by Gamma Rays

Strong, A.W., Bignami, G.F., Bloemen, J.B.G.M., Buccheri, R., Caraveo, P.A., Hermesen, W., Kanbach, G., Lebrun, F., Mayer-Hasselwander, H.A., Paul, J.A. **115**, 404

Ultraviolet Spectrum of the Sky Background at Different Galactic Latitudes

Zvereva, A.M., Severny, A.B., Granitzky, L.V., Hua, C.T., Cruvellier, P., Courtès, G. **116**, 312

Evolution of very low-mass stars

van der Linden, T., Staller, R. **118**, 285

Modification of the local interstellar gas properties in the heliospheric interface

Ripken, H.W., Fahr, H.J. **122**, 181

The hydrodynamic motions of OB stars

Quiroga, R.J., Tarsia, R. **127**, 245

Four-colour *uvby* and $H\beta$ photometry of A5 to G0 stars brighter than 8.3

Olsen, E.H. **127**, 424; **54**, 55

Solar Oscillations

Comparison of Observed Solar Whole-disk Oscillation Frequencies with the Predictions of a Sequence of Solar Models

Christensen-Dalsgaard, J., Gough, D.O. **104**, 173

Detection of a 192s Oscillatory Component on the Sun at 8.6 mm Wavelength

Bocchia, R. **106**, 79

The Solar Structure and the Low l Five-minute Oscillation. I

Gabriel, M., Scuflaire, R., Noels, A. **110**, 50

New Features of the Oscillation Spectrum of the Sun

Kneer, F., Newkirk, G., Jr., von Uexküll, M. **113**, 129

The Solar Structure and the Low l Five-minute Oscillation. II

Scuflaire, R., Gabriel, M., Noels, A. **113**, 219

Spectral Line Transfer Effects in Lambda-meter Measurements of Solar Short-period Oscillations

Deubner, F.-L., Durrant, C.J., Kaltenbacher, J. **114**, 85

Angular Velocity of Sunspots Along the Butterfly Diagram

Godoli, G., Mazzucconi, F. **116**, 188

Brightness oscillations of the Sun's chromosphere in K and $H\alpha$

Kneer, F., von Uexküll, M. **119**, 124

Stability of a $1 M_{\odot}$ star with decreasing gravitational constant

Boury, A., Scuflaire, R., Noels, A., Gabriel, M. **119**, 253

Short period coronal oscillations: observation and interpretation

Koutchmy, S., Zugžda, Y.D., Locàn, V. **120**, 185

The influence of seeing on the observation of short period fluctuations in the solar atmosphere

Endler, F., Deubner, F.-L. **121**, 291

How dense is the g-spectrum?

Perdang, J. **122**, 39

The chromosphere above sunspot umbrae. IV. Frequency analysis of umbral oscillations

von Uexküll, M., Kneer, F., Mattig, W. **123**, 263

Influence of the equations of state and of the Z value on the solar five-minute oscillation

Shibahashi, H., Noels, A., Gabriel, M. **123**, 283

The effects of nonlinearities on radial and nonradial oscillations

Buchler, J.R., Regev, O. **123**, 331

Hydrostatic reaction of the Sun to local disturbances

Däppen, W. **124**, 11

Calculation of stellar structure. III. Solar models that satisfy the necessary conditions for a unique solution to the stellar structure equations

Rouse, C.A. **126**, 102

Solar Photosphere, see also Solar Atmosphere, Solar Granulation

Solar Line Blocking for $\lambda\lambda$ 4006-6860

Ardeberg, A., Virdefors, B. **73**, 370; **36**, 317

A Common Model for Solar Filigree and Faculae

Stellmacher, G., Wiehr, E. **75**, 263

An Investigation of the Solar Na D Line Observations

Tomley, L. **81**, 95

Collisional Broadening of Spectral Lines in Laboratory and Solar Spectra. I. The 6162, 6122, 6102 Å Multiplet of Neutral Calcium

O'Neill, J.A., Smith, G. **81**, 100

Collisional Broadening of Spectral Lines in Laboratory and Solar Spectra. II. Low Excitation Lines of Neutral Iron

O'Neill, J.A., Smith, G. **81**, 108

Oscillator Strengths of Fe II Lines Derived from the Solar Spectrum: Choice of Solar Model Atmosphere

Blackwell, D.E., Shallis, M.J., Simmons, G.J. **81**, 340

The Interpretation of Solar Line Shift Observations

Keil, S.L. **82**, 144

On the Retrieval of Velocity Gradients from Photospheric Line Asymmetries: A Linearized Approach

Caccin, B., Marmolino, C. **83**, 73

Solar Limb Emission Lines near Ca II H & K and Their Spatial Intensity Variations

Rutten, R.J., Stencel, R.E. **83**, 384; **39**, 415

Resonance-line Polarization. IV. Observations of Non-magnetic Line Polarization and Its Center-to-limb Variations

Stenflo, J.O., Baur, T.G., Elmore, D.F. **84**, 60

Resonance-line Polarization. V. Quantum-mechanical Interference between States of Different Total Angular Momentum

Stenflo, J.O. **84**, 68

A Fabry Perot Spectrometer for Measuring Solar Velocity Fields

Cavallini, F., Ceppatelli, G., Righini, A., Barletti, R. **85**, 255

Resonance-line Polarization. VI. Line Wing Transfer Calculations Including Excited State Interference

Auer, L.H., Rees, D.E., Stenflo, J.O. **88**, 302

The Formation of Na I Spectral Lines in the Solar Atmosphere

Caccin, B., Gomez, M.T., Roberti, G. **92**, 63

Large-scale Solar Motions as Determined by Doppler Shift Measurements Using a Linear Photodiode Array

Pérez Garde, M., Vázquez, M., Schwan, H., Wöhl, H. **93**, 67

Measurement of Solar Disc Polarization in a Number of Fraunhofer Lines and Their Adjacent Continuum. III. Comparison with Independent Measurements and with Calculations

Wiehr, E. **95**, 54

Vertical Structure of the Solar Photosphere

Durrant, C.J., Nesis, A. **95**, 221

Granular-size Horizontal Velocities in the Solar Atmosphere

Mattig, W., Mehlretter, J.P., Nesis, A. **96**, 96

Solar Granulation: Influence on Convection of Spectral Line Asymmetries and Wavelength Shifts

Dravins, D., Lindegren, L., Nordlund, Å. **96**, 345

The Third Central Moment of Photospheric Lines as a Measure of Velocity Gradients and Line Shifts

Marmolino, C., Severino, G. **100**, 191

On the Establishment of Internally Consistent Solar Scales of Oscillator Strengths and Abundances of Chemical Elements. II. On the Errors of the Oscillator Strengths of Fe I Lines in the Kurucz-Peytremann gf-scale

Gurtovenko, E.A., Kostik, R.I. **101**, 132

Non-resonance Lines of Neutral Calcium in the Spectra of the Sun and Procyon

Smith, G. **103**, 351

- On the Establishment of Internally Consistent Solar Scales of Oscillator Strengths and Abundances of Chemical Elements. I. Oscillator Strengths for 865 Fe I Lines Iron Abundance
Gurtoenko, E.A., Kostik, R.I. **104**, 170; **46**, 239
- The Structure of the Solar Magnetic Field Below the Photosphere. I. Adiabatic Flux Tube Models
van Ballegoijen, A.A. **106**, 43
- Table of Solar Diatomic Molecular Lines. IV. Spectral Range: 7600-8100
Boyer, R., Sotirovski, P., Harvey, J.W. **106**, 181; **47**, 145
- On the Establishment of Internally Consistent Solar Scales of Oscillator Strengths and Abundances of Chemical Elements. III. Oscillator Strengths Obtained from Equivalent Widths of 360 Fe I Lines
Gurtoenko, E.A., Kostik, R.I. **106**, 378; **47**, 193
- Numerical Simulations of the Solar Granulation. I. Basic Equations and Methods
Nordlund, Å. **107**, 1
- Infrared Bands of C₂ in the Solar Photospheric Spectrum
Brault, J.W., Delbouille, L., Grevesse, N., Roland, G., Sauval, A.J., Testerman, L. **108**, 201
- An Atlas of Theoretical Stokes Profiles for Solar Disk Observations
Arena, P., Landi Degl'Innocenti, E. **108**, 416; **48**, 81
- Absolute Measurement of the Bisector of the 6301.5091 Fe I Line in the Solar Spectrum
Cavallini, F., Ceppatelli, G., Righini, A. **109**, 233
- On the Magnitude and the Height Dependence of the Granular Vertical Flow Velocity
Bässgen, M., Deubner, F.-L. **111**, L1
- Velocity Fields and Spectral Line Asymmetries: A Linearized Analytical Approach to the Theory of the Line Bisector in a Milne-Eddington Atmosphere
Buonaura, B., Caccin, B. **111**, 113
- The Influence of Temperature Inhomogeneities in the Solar Atmosphere on Abundance Determinations
Hermesen, W. **111**, 233
- Vertical Structure of the Solar Photosphere II. The Small-scale Velocity Field
Durrant, C.J., Nesis, A. **111**, 272
- Analysis of Fe I Lines ($0.00 \text{ eV} < \chi < 12.6 \text{ eV}$) in the Solar Spectrum Using Improved Damping Constants and Accurate Oscillator Strengths: Test of a Solar Model Atmosphere
Simmons, G.J., Blackwell, D.E. **112**, 209
- Spectral Line Transfer Effects in Lambda-dameter Measurements of Solar Short-period Oscillations
Deubner, F.-L., Durrant, C.J., Kaltenbacher, J. **114**, 85
- Empirical NLTE Analyses of Solar Spectral Lines. III. Iron Lines Versus LTE Models of the Photosphere
Rutten, R.J., Kostik, R.I. **115**, 104
- The Asymmetry of Photospheric Absorption Lines. I. An Analysis of Mean Solar Line Profiles
Kaisig, M., Durrant, C.J. **116**, 332
- Empirical NLTE analyses of solar spectral lines. IV. The Fe I curve of growth
Rutten, R.J., Zwaan, C. **117**, 21
- On the errors of the Kurucz-Peytremann Fe I oscillator strengths
Irwin, A.W. **117**, 173
- Profiles and shifts of the C I 5052-Å line in the granulation spectrum
Namba, O., Hafkenscheid, G.A.M., Koyama, S. **117**, 277
- The asymmetry of photospheric absorption lines. II. The asymmetry of medium-strong Fe I lines in quiet and active regions of the Sun
Kaisig, M., Schröter, E.H. **117**, 305
- Coherent scattering in the solar spectrum: survey of linear polarization in the range 3165-4230 Å
Stenflo, J.O., Twerenbold, D., Harvey, J.W. **121**, 164; **52**, 161
- Photometric analysis of sunspot umbral dots. III. Spectrophotometry and preliminary model of a 2-component umbra
Adjabshirzadeh, A., Koutchmy, S. **122**, 1
- A matrix photodiode array to measure Doppler shifts of solar spectral lines
Küveler, G., Wöhl, H. **122**, 69
- Solar limb brightening measurements at 3.4 mm wavelength
Gómez-González, J., Barcia, A., Delgado, L., Planesas, P. **122**, 219
- Daily variations of the photospheric equatorial rotation velocity of the Sun and its absolute values in 1981 and 1982 as determined from measurements using a two-dimensional photodiode array
Küveler, G., Wöhl, H. **123**, 29
- Balloon-borne imagery of the solar granulation. IV. The centre-to-limb variation of the intensity fluctuations
Durrant, C.J., Mattig, W., Nesis, A., Schmidt, W. **123**, 319
- Solar Prominences**, see also Filaments
- Horizontal Temperature Gradient Measurements and the Condensation of a Solar Prominence
Mouradian, Z., Martres, M.-J., Soru-Escaut, I. **79**, 138
- The Influence of Spatial Resolution on the Ca⁺K Line Width and Shift in a Quiescent Prominence
Engvold, O., Wiehr, E., Wittmann, A. **85**, 326
- Quantum Theory of the Hanle Effect II: Effect of Level-crossings and Anti-level-crossings on the Polarization of the D₃ Helium Line of Solar Prominences
Bommier, V. **87**, 109
- Determination of the Complete Vector Magnetic Field in Solar Prominences, Using the Hanle Effect
Bommier, V., Leroy, J.L., Sahal-Bréchet, S. **100**, 231
- Dynamics of the Eruptive Prominence of 6 May 1980 and Its Relationship to the Coronal Transient
Mein, N., Schmieder, B., Simon, G., Tandberg-Hanssen, E., Wu, S.T. **114**, 192
- Magnetic Field in Solar Prominences Measured with a New Spectrally Scanning Magnetograph
Kim, I.S., Koutchmy, S., Nikolsky, G.M., Stellmacher, G. **114**, 347
- Dynamics of solar filaments. II. Mass motions in an active region filament from H α center to limb observations
Malherbe, J.M., Schmieder, B., Ribes, E., Mein, P. **119**, 197
- The electron density of faint prominences observed during the solar eclipse of July 31, 1981
Koutchmy, S., Lebecq, C., Stellmacher, G. **119**, 261
- Dynamical behaviour of surges
Banos, G., Daras-Papamargaritis, H. **120**, 181
- OSO-8 observations of a quiescent prominence: a comparison of Lyman- α with theoretical intensities
Heinzel, P., Vial, J.-C. **121**, 155
- Current sheet models for solar prominences. I. Magnetohydrostatics of support and evolution through quasi-static models
Malherbe, J.M., Priest, E.R. **123**, 80

Current sheet models for solar prominences. II. Energetics and condensation process

Malherbe, J.M., Priest, E.R., Forbes, T.G., Heyvaerts, J. **127**, 153

Solar Radio Radiation, see also Bursts

The "Head-On" Approximation in Second Harmonic Plasma Emission

Melrose, D.B., Stenhouse, J.E. **73**, 151

Microwave Radar Observations of the Sun

Benz, A.O., Fitze, H.R. **76**, 354

A Model for Sunspot Associated Emission at 6 cm Wavelength

Alissandrakis, C.E., Kundu, M.R., Lantos, P. **82**, 30

6 cm Observations of a Solar Active Region and Bursts with ~6" Resolution

Erskine, F.T., Kundu, M.R., Rao, A.P. **83**, 256

On a Day-time Ionospheric Effect on some Radio Intensity Measurements and Interferometry

Meyer-Vernet, N. **84**, 142

Synthesized Map of a Solar Filament at 6 cm with ~15" Resolution

Rao, A.P., Kundu, M.R. **86**, 373

Upper Limits on the Power in Solar Oscillations at 1.2 mm, 9 mm, 3.7 cm, and 11.1 cm Wavelengths

Kundu, M.R., Schmahl, E.J. **90**, 192

High Resolution Interferometric Observations of the Solar Limb at 4.9 and 10.7 GHz During the Solar Eclipse of October, 1977

Marsh, K.A., Hurford, G.J., Zirin, H. **94**, 67

VLA Observations of Solar Active Regions at 6 cm Wavelength

Kundu, M.R., Schmahl, E.J., Rao, A.P. **94**, 72

Some Effects Produced by the Ionosphere on Radio Interferometry: Fluctuations in Apparent Source Position and Image Distortion

Bougeret, J.L. **96**, 259

X-ray, EUV, and Centimetric Observations of Solar Active Regions: an Empirical Model for Bright Radio Sources

Pallavicini, R., Sakurai, T., Vaiana, G.S. **98**, 316

Simultaneous Calibration of Solar Radio Instruments from Decimetre to Decametre Wavelengths

Elgarøy, Ø., Slottje, C., Tlamicha, A., Urbarz, H., Zanelli, C., Zlobec, P., Bougeret, J.L., Kerdraon, A., de la Noë, J. **99**, 401; **44**, 165

Relationship Between a Soft X-ray Long Duration Event and an Intense Metric Noise Storm

Lantos, P., Kerdraon, A., Rapley, G.G., Bentley, R.D. **101**, 33

Thermal Radio Emission of Solar Active Regions Derived from Quantitative Analysis of Skylab X-ray Pictures and Compared with Observation

Elwert, G., Villing, W., Vorpahl, J., Broussard, R.M. **101**, 150

Correlation between Bandwidth and Frequency Drift Velocity of Intermediate Drift Bursts

Elgarøy, Ø., Soldal, O. **104**, 99

Solar Type I Noise Storms and Newly Emerging Magnetic Flux

Spicer, D.S., Benz, A.O., Huba, J.D. **105**, 221

Detection of a 192s Oscillatory Component on the Sun at 8.6 mm Wavelength

Bocchia, R. **106**, 79

Search for Harmonic Emission in Solar Type I Radio Bursts

Jaeggi, M., Benz, A.O. **107**, 88

About the Relation Between Radio and Soft X-ray Emission in Case of Very Weak Solar Activity

Fürst, E., Benz, A.O., Hirth, W. **107**, 178

Radio Imaging of Solar Flares Using the Very Large Array: New Insights into Flare Process

Kundu, M.R., Schmahl, E.J., Velusamy, T., Vlahos, L. **108**, 188

Fine Structure near the Starting Frequency of Solar Type III Radio Bursts

Benz, A.O., Zlobec, P., Jaeggi, M. **109**, 305

A Diffuse Component of Solar Electron Streams as a Possible Source of Decametric and Hectometric Continuum

Levin, B.N. **111**, 71

An Association Between Coronal Structures and Type III Burst Sources

Trottet, G., Pick, M., House, L., Illing, R., Sawyer, C., Wagner, W. **111**, 306

Diagnostic of Coronal Magnetic Fields from Microwave Polarization Reversal

Bandiera, R. **112**, 52

The Importance of Plasma Effects on Electron-cyclotron Maser-emission from Flaring Loops

Sharma, R.R., Vlahos, L., Papadopoulos, K. **112**, 377

Visible Light Observations of a Dense Plasmoid Associated with a Moving Type IV Solar Radio Burst

Stewart, R.T., Dulk, G.A., Sheridan, K.V., House, L.L., Wagner, W.J., Sawyer, C., Illing, R., Wagner, W. **116**, 217

Mm- to cm-wavelength time delays in solar burst emission and the effect of varying magnetic field

Costa, J.E.R., Kaufmann, P. **119**, 131

The excitation of type II radio bursts in the corona

Wagner, W.J., MacQueen, R.M. **120**, 136

VLBI of solar flares

Tapping, K.F., Kuipers, J., Kaastra, J.S., van Nieuwkoop, J., Graham, D., Slottje, C. **122**, 177

Solar limb brightening measurements at 3.4 mm wavelength

Gómez-González, J., Barcia, A., Delgado, L., Planesas, P. **122**, 219

Dissipative thermal models for solar microwave burst delays

Brown, J.C., MacKinnon, A.L., Zodi, A.M., Kaufmann, P. **123**, 10

Solar-type U bursts and coronal transients

Leblanc, Y., Poquéusse, M., Aubier, M.G. **123**, 307

The Sun at 1.4 GHz: intensity and polarization

Dulk, G.A., Gary, D.E. **124**, 103

One-dimensional high time resolution solar observations with the Westerbork Synthesis Radio Telescope

Kattenberg, A., Palagi, F. **125**, 1

Brightness temperature of solar radio noise storm continua

Kerdran, A., Mercier, C. **127**, 132

The circularly polarized Sun at 12.6 cm wavelength

Lang, K.R., Willson, R.F. **127**, 135

Solar Rotation

Solar p-Mode Oscillations as a Tracer of Radial Differential Rotation

Deubner, F.-L., Ulrich, R.K., Rhodes, E.J., Jr. **72**, 177

Differential Rotation and Meridional Motions of Sunspots in the Years 1940-1968

Balthasar, H., Wöhl, H. **92**, 111

On the Solar Rotation Elements as Determined from Sunspot Observations

Stark, D., Wöhl, H. **93**, 241

Screening Effects in the Solar Convection Zone

Stix, M. **93**, 339

The Solar Torsional Oscillation and Dynamo Models of the Solar Cycle

Schüssler, M. **94**, L17

Erratum: Differential Rotation and Meridional Motions of Sunspots in the Years 1940–1968

Balthasar, H., Wöhl, H. **98**, 422

The Sun's Rotation Derived from Sunspots 1970–1979

Lustig, G. **106**, 151

Differential Rotation and Meridional Motions of Sunspots from 1874 to 1902

Arévalo, M.J., Gomez, R., Vázquez, M., Balthasar, H., Wöhl, H. **111**, 266

Angular Velocity of Sunspots Along the Butterfly Diagram

Godoli, G., Mazzucconi, F. **116**, 188

Erratum: Differential rotation and meridional motions of sunspots from 1874 to 1902

Arévalo, M.J., Gomez, R., Vázquez, M., Balthasar, H., Wöhl, H. **117**, 170

Two comments on the Sun's differential rotation

Schmidt, W., Stix, M. **118**, 1

Daily variations of the photospheric equatorial rotation velocity of the Sun and its absolute values in 1981 and 1982 as determined from measurements using a two-dimensional photodiode array

Küveler, G., Wöhl, H. **123**, 29

Solar rotation 1947–1981 – determined from sunspot data

Lustig, G. **125**, 355

Solar System, see Cosmogony

On the Invariable Plane of the Solar System

Burkhardt, G. **106**, 133

Solar Type Stars

Metal Abundances and Microturbulence in Seven Solar-type Stars. II. Model Atmosphere Analyses

Gehren, T. **75**, 73

Comparison of Solar and Stellar Flux Distributions and the Determination of the *B-V* and *U-B* Colors of the Sun

Clements, G.L., Neff, J.S. **75**, 193

The Angular Momentum Controlled Evolution of Solar Type Contact

Van't Veer, F. **80**, 287

On the Photometric Colour Indices of the Sun

Chmielewski, Y. **93**, 334

In Search of Real Solar Twins

Cayrel de Strobel, G., Knowles, N., Hernandez, G., Bentolila, C. **94**, 1

Contribution to the Search for Solar Spectral Analogs. An Analysis of 16 Cyg A and B

Perrin, M.-N., Spite, M. **94**, 207

The Temperature Scale of Solar-type Stars

Gehren, T. **100**, 97

The Sun Among the Stars. V. A Second Search for Solar Spectral Analogs. The Hyades' Distance

Hardorp, J. **105**, 120

Models of Stellar Evolution and Their Use in Calibrating Distances and Element Abundances of Stars

Gehren, T. **109**, 187

The missing UV opacity and the colours of solar-type stars

Magain, P. **122**, 225

Space Motion

Dispersion Inhomogeneities of Nearby Stars Velocities Along the Direction $l = 330^\circ$, $b = 0^\circ$

Menge de Freitas, S. **89**, 253; **41**, 433

Systematic Motions of Fundamental Stars

Brosche, P., Schwan, H. **99**, 311

Erratum: Systematic Motions of Fundamental Stars

Brosche, P., Schwan, H. **103**, 427

The gradients of the velocity ellipsoid for nearby stars

Oblak, E. **123**, 238

Space Probes

Electrodynamics of submicron dust in the cometary coma

Wallis, M.K., Hassan, M.H.A. **121**, 10

A determination of the electron density fluctuation spectrum in the solar wind, using the ISEE propagation experiment

Celnikier, L.M., Harvey, C.C., Jegou, R., Kemp, M., Moricet, P. **126**, 293

Speckle Interferometry

Solar Seeing and the Statistical Properties of the Photospheric Solar Granulation. III. Solar Speckle Interferometry

Ricort, G., Aime, C. **76**, 324

Angular Diameter of IRC + 10216, Mira, R Cas, and GL 2591 in the near Infrared

Foy, R., Chelli, A., Sibille, F., Léna, P. **79**, L5

Infrared Speckle Interferometry

Sibille, F., Chelli, A., Léna, P. **79**, 315

Orbital Inclination and Masses Newly Determined from the Triple System Algol

Bonneau, D. **80**, L11

Speckle Interferometric Observations of Binary Systems with the Haute-Provence 1.93 m Telescope

Bonneau, D., Foy, R. **86**, 295

A Method for Processing Speckle Images Requiring no Reference Point Source

Bruck, Yu.M., Sodin, L.G. **87**, 188

Speckle Interferometric Measurements of Binary Stars

Bonneau, D., Blazit, A., Foy, R., Labeyrie, A. **91**, 380; **42**, 185

Speckle Interferometry with the CFHT 3.60 m. I. Resolution of the System Pluto-Charon

Bonneau, D., Foy, R. **92**, L1

Solar Granulation Study in Partial Eclipse Conditions Using Speckle Interferometric Techniques

Ricort, G., Aime, C., Deubner, F., Mattig, W. **97**, 114

Observations of the Brightness Structure of α Orionis

Ricort, G., Aime, A., Vernin, J., Kadiri, S. **99**, 232

Near-infrared Slit Scans of Molecular Cloud Sources. II

Dyck, H.M., Staude, H.J. **109**, 320

One-dimensional high resolution image reconstruction on Eta Carinae at 4.6 μ m with speckle data

Chelli, A., Perrier, C., Biraud, Y.G. **117**, 199

Infrared speckle imaging: improvement of the method; results on Miras and protostars

Mariotti, J.M., Chelli, A., Foy, R., Léna, P., Sibille, F., Tchountonov, G. **120**, 237

Speckle interferometry observations of the asteroids Juno and Amphitrite

Baier, G., Weigelt, G. **121**, 137

Speckle interferometry observations of Pluto's moon Charon

Hetterich, N., Weigelt, G. **125**, 246

Spectra, see under the different Objects, and Line Identification, Spectral Classification, Spectroscopy

Synthetic Spectrum of the Integrated Starlight Between 3000 and 10000 Å. Part I. Method of Calculation and Results

Mattila, K. **81**, 388; **39**, 53

Observations of the Interstellar Ultraviolet Radiation Field from the S2/68 Sky-survey Telescope

Gondhalekar, P.M., Phillips, A.P., Wilson, R. **85**, 272

Methods for the Analysis of Stellar Spectra Veiled by Lines (III)

Greve, A., Zwaan, C. **90**, 239

The Application of a Coherent Optical Data Processing System to Photographically Recorded Astronomical Spectra

Bates, B., Giarretta, D.L., Sweeney, P.J.P. **90**, 318

The spectrum of FG Sge in 1979-1982. II. $\lambda\lambda$ 6250-6800 Å

Acker, A. **128**, 261; **54**, 293

The IR silicate features as a measure of grain size in circumstellar dust

Papoular, R., Pégourié, B. **128**, 335

Spectral Classification

Spectral Classification from the Ultraviolet Line Features of S 2/68 Spectra. IV. Late-type Stars

Cucchiari, A., Macau-Hercot, D., Jaschek, M., Jaschek, C. **71**, 270; **35**, 75

Resolution of the C IV + Fe III Blend at 1550 Å. II. The Predominance of C IV in Stars Hotter than B1

Barbier, R., Swings, J.P. **72**, 374

Analysis of the Results of MK Classification of 176 Stars in 37 Southern Open Clusters

Fitzgerald, M.P., Luiken, M., Maitzen, H.M., Moffat, A.F.J. **76**, 257; **37**, 345

Estimation of Spectral Classifications for Bright Southern Stars with Interesting Strömgren Indices

Olsen, E.H. **76**, 257; **37**, 367

On the Spectrographic and Photometric Data for the Brightest Stars in the Small Magellanic Cloud

Ardeberg, A., Maurice, E. **77**, 269

On the MK Spectral Classification of Metal-poor Late-type Stars

Foy, R. **78**, 25

Estimation of Spectral Classifications for Bright Northern Stars with Interesting Strömgren Indices

Olsen, E.H. **82**, 394; **39**, 205

Prediction of Spectral Classification from Photometric Observations - Application of the *wby* Photometry and the MK Spectral Classification. I. Prediction Assuming a Luminosity Class

Heck, A., Mersch, G. **83**, 287

Prediction of Spectral Classification from Photometric Observations - Application to the *wby* Photometry and the MK Spectral Classification. II. General Case

Mersch, G., Heck, A. **85**, 93

Spectral Classification from the Ultraviolet Line Features of S2/68 Spectra. V. Supplement Series

Cucchiari, A., Jaschek, M., Jaschek, C., Macau-Hercot, D. **85**, 266; **40**, 207

A Sample of New Hot Subluminous Stars Taken from the List of Ultraviolet Objects Detected by the S2/68 Sky Survey Experiment

Berger, J., Fringant, A.-M. **85**, 367

Intrinsic Colours of MK Types in the Geneva Photometric System

Meylan, G., Python, M., Hauck, B. **90**, 83

A Classification of Be Stars

Jaschek, M., Hubert-Delplace, A.-M., Hubert, H., Jaschek, C. **91**, 263; **42**, 103

Low-dispersion Spectral Classification and *UBV* Photographic Photometry of H α -Emission Objects in the Coalsack Region

Martinez, R.E., Muzzio, J.C., Waldhausen, S. **91**, 380; **42**, 179

Multicolour Photometry of Stars in the Ophiuchus Dark Cloud Region

Chini, R. **99**, 346

Spectral Classification in the MK System of 167 Northern HD Stars

Jensen, K.S. **102**, 281; **45**, 455

On the Estimation of Photometric Spectral Types

Oblak, E., Chareton, M. **102**, 281; **45**, 459

An Outline of a Computer Program for Two-dimensional Spectral Classification

Zekl, H. **108**, 380

Equivalent Width Measurements in Galactic Supergiant and in Small Magellanic Cloud Star Spectra

Dubois, P. **110**, 182; **48**, 375

Erratum: An Outline of a Computer Program for Two-dimensional Spectral Classification

Zekl, H. **113**, 178

Principal components analysis of spectral data. I. Methodology for spectral classification

Whitney, C.A. **119**, 325; **51**, 443

Principal components analysis of spectral data. II. Error analysis and applications to interstellar reddening, luminosity classification of M supergiants, and the analysis of VV Cephei stars

Whitney, C.A. **119**, 325; **51**, 463

Spectral Lines, see Equivalent Widths, Line ...

Solar Granulation: Influence on Convection of Spectral Line Asymmetries and Wavelength Shifts

Dravins, D., Lindegren, L., Nordlund, Å. **96**, 345

Magnesium II line formation: the contribution of high atomic levels to the resonance lines

Lemaire, P., Gouttebroze, P. **125**, 241

The BUSS spectrum of β Lyrae

Hack, M., Sahade, J., de Jager, C., Kondo, Y. **126**, 115

Spectrophotometry

A Spectrophotometric Study of the Nebula around FG SGE

Kupo, I., Leibowitz, M. **71**, 102

The Monochromatic Flux of 14 Southern Standard Stars from 3200 Å to 8800 Å

Tüg, H. **81**, 388; **39**, 67

Measurements of the Energy Distributions of Southern Standard Stars from 3200 Å to 8800 Å

Tüg, H. **82**, 195

Absolute Ultraviolet Spectrophotometry with the TD-1 Satellite. XI. Spectrophotometric Study of Be and Shell Stars with the S 2/68 Experiment

Beeckmans, F., Hubert-Delplace, A.M. **86**, 72

A Catalogue of Stellar Spectrophotometric Data

Ardeberg, A., Virdefors, B. **86**, 268; **40**, 307

Methods for Accurate Photographic Stellar Spectrophotometry Using the Solar Spectrum as Calibration

Lind, J., Dravins, D. **90**, 151

The Sun among the Stars. III. Energy Distributions of 16 Northern G-type Stars and the Solar Flux Calibration

Hardorp, J. **91**, 221

How to Measure the Sun like a Star

Tüg, H. **105**, 395

Picture Gallery: a Structured Presentation of OAO-2 Photometric Data Supported by OAO-2 Spectrophotometric Data and *UBV*, *ANS* and *TD1* Observations

Koornneef, J., Meade, M.R., Wesselius, P.R., Code, A.D., van Duinen, R.J. **106**, 381; **47**, 341

On the Linearity of the SWP Camera of the International Ultraviolet Explorer (IUE): A Correction Algorithm

Holm, A., Bohlin, R.C., Cassatella, A., Ponz, D.P., Schiffer, F.H. **112**, 341

Spectrophotometry of Peculiar B and A Stars. XII. HD 10783, 56 Tauri, HD 43819, 53 Aurigae, 49 Camelopardalis, HD 64486, HD 147550, HD 184905 and HD 192913

Adelman, S.J. **112**, 394; **49**, 663

Observations of emission line galaxies. I. The Seyfert-I galaxies Mkn 1040, Mkn 1044

Rafanelli, P., Schulz, H. **117**, 109

Spectrophotometry of peculiar B and A stars. XV. α Andromedae, AR Aurigae, 36 Aurigae, 36 Lyncis, ϕ Herculis, HR 6127, and HR 6997

Adelman, S.J., Pyper, D.M. **118**, 313

Spectrophotometry of peculiar B and A stars. XIII. HD 51418, 53 Camelopardalis, 78 Virginis, and Kappa Piscium

Pyper, D.M., Adelman, S.J. **119**, 324; **51**, 365

Spectrophotometry of peculiar B and A stars. XIV. 56 Arietis, 41 Tauri, 25 Sextantis, HD 170973, HD 205087, and HD 215441

Adelman, S.J. **119**, 326; **51**, 511

The Gum Nebula: new photometric and spectrophotometric results

Chanot, A., Sivan, J.P. **121**, 19

A photometric atlas of the spectrum of γ Tauri $\lambda\lambda$ 5186-8700 Å

Appelquist, L., Andersen, J., Fisher, W.A., Fletcher, J.M., Kjaergaard, P. **121**, 330; **52**, 237

Spectroscopic observations of the cataclysmic variable HL CMa during outburst

Wargau, W., Bruch, A., Drechsel, H., Rahe, J. **125**, L1

Spectrophotometry of low excitation Herbig-Haro objects

Böhm, K.H., Brugel, E.W., Olmsted, E. **125**, 23

Spectroscopy and infrared photometry of southern T Tauri stars

Appenzeller, I., Jankovics, I., Krautter, J. **125**, 177; **53**, 291

Far ultraviolet colors of B and Be stars

Zorec, J., Briot, D., Divan, L. **126**, 192

Far ultraviolet colors of β Cephei stars

Zorec, J., Briot, D., Divan, L. **126**, 205

Absolute measurements of flux in the continuum of galactic Wolf-Rayet stars: comparison with main-sequence OB stars.

Hua Chon-Trung, Woo Jong-Ok, Nguyen Huu-Doan **126**, 222; **53**, 407

The Crab Nebula. II. Near-infrared spectrophotometry of a bright filament

Dennefeld, M., Péquignot, D. **127**, 42

Ground-based infrared spectrophotometry of evolved objects and late-type stars

Eiroa, C., Hefele, H., Zhong-yu, Q. **128**, 262; **54**, 309

Spectroscopic Binaries, see also **Eclipsing Binaries**

64 Piscium, a Double Line Spectroscopic Binary, Discussion on Orbital Elements

Nadal, R., Ginestet, N., Carquillat, J.-M., Pédoussaut, A. **71**, 273; **35**, 203

The Ultraviolet Spectrum of Upsilon Sagittarii

Dwignau, H., Friedjung, M., Hack, M. **71**, 310

A Comparison of the Orbital Inclinations of the Spatially Close Spectroscopic Double Stars

Yavuz, I. **73**, 364; **36**, 25

Period and Spectroscopic Orbit of TU Hor

Duerbeck, H.W., Surdej, A., Surdej, J. **73**, 369; **36**, 283

A Spectroscopic Binary with Ca II Emission Lines

Carquillat, J.-M., Nadal, R., Ginestet, N., Pédoussaut, A. **74**, 113

Copernicus Observations of Theta-2, OriA, a Proposed Optical Counterpart of the X-ray Source 4U 0531-05

Bernacca, P.L., Bianchi, L. **75**, 61

An Analysis of the Barr Effect

Fracastoro, M.G. **78**, 112

On the System V 861 SCO \equiv OAO 1653-40

Tanzi, E.G., Treves, A., Salinari, P., Tarengi, M. **78**, 226

A Spectroscopic Orbit of RZ Cassiopeiae

Duerbeck, H.W., Hänel, A. **78**, 249; **38**, 155

The Nature of the Secondaries in Some Single-line Spectroscopic Binaries from X-ray Observations

den Boggende, A.J.F., Lamers, H.J.G.L., Mewe, R. **80**, 1

Orbits of Spectroscopic Binaries Determined with the Corav I Photoelectric Radial Velocity Spectrometer. I - HD 175 742

Imbert, M. **80**, 331; **38**, 491

Contribution to the Study of Composite Spectra Stars. I. New Organization for the Bright Stars Pattern of Hynek's Lists

Ginestet, N., Pédoussaut, A., Carquillat, J.M., Nadal, R. **81**, 333

Speckle Interferometric Observations of Binary Systems with the Haute-Provence 1.93 m Telescope

Bonneau, D., Foy, R. **86**, 295

HR 976 and 4 C 34.13: An X-ray Odd Couple

Cash, W., Snow, T.P., Jr. **91**, L7

A Spectroscopic Orbit for HR 6626

Mayor, M., Griffin, R.F. **91**, 112

The Disappearance of V-V 1-7 and the Nature of Its Central Star

Méndez, R.H., Lee, P., O'Brien, A., Liller, W. **91**, 331

Duplicity in the Solar Neighborhood. I. A new Spectroscopic Orbit for BY Draconis

Lucke, P.B., Mayor, M. **92**, 182

Orbites spectroscopiques d'étoiles doubles déterminées avec le spectromètre photoélectrique à vitesses radiales Coravel II-HD 195987

Imbert, M. **92**, 324; **42**, 331

Observations of New Southern Spectroscopic Binaries with the Objective Prism Method

Giesekeing, F. **95**, 209; **43**, 33

Kinematical Studies of Open Clusters and OB-associations from Relative Radial Velocity Observations. I. The Open Cluster NGC 3532

Giesekeing, F. **99**, 155

List of Estimated Angular Separations of Spectroscopic Binaries

Halbwachs, J.L. **99**, 203; **44**, 43

The Spectrographic Binary HD 16219

Hube, D.P. **99**, 203; **44**, 59

Infrared and X-ray Observations of the Binary System V 861 Sco

Tanzi, E.G., Maraschi, L., Treves, A., Tarengi, M. **100**, 68

The Evolutionary Status of Upsilon Sagittarii

(=HD 181615) as Derived from Ultraviolet and Visual Observations

Hellings, P., de Loore, C., Burger, M., Lamers, H.J.G.L.M. **101**, 161

Magnetic Structure in Cool Stars. III. Ca II H and K Emission and Rotation of Main-sequence Stars

Middelkoop, F. **101**, 295

Statistical Models for Spectroscopic and for Eclipsing Binary Stars

- Halbwachs, J.L.* **102**, 191
- On the Period of the Interacting Binary UW Canis Majoris
Herczeg, T., Drechsel, H., Rahe, J. **104**, 256
- Duplicity in the Solar Neighborhood. II. Spectroscopic Orbits for Four Bright Stars: HD 21018, HD 30021, HD 158837, and HD 190658
Lucke, P.B., Mayor, M. **105**, 318
- Spectroscopic Orbits for Three Double-lined Binaries in the Hyades Field, 22°669, vA 771, and vB 166
Griffin, R.F., Mayor, M., Gunn, J.E. **106**, 221
- Orbital Motion of the Pulsating Star V644 Her (Text in French)
Bardin, C., Imbert, M. **106**, 380; **47**, 319
- Magnetic Structure in Cool Stars. IV. Rotation and Ca II H and K Emission of Main-sequence Stars
Middelkoop, F. **107**, 31
- Contribution to the Study of Composite Spectra. II. A, Am, Ap Spectroscopic Binaries (Text in French)
Ginestet, N., Jaschek, M., Carquillat, J.M., Pédoussaut, A. **107**, 215
- Spectroscopic Orbits for Two Very High Velocity Halo Stars: HD 111980 and HD 149414
Mayor, M., Turon, C. **110**, 241
- Mass Loss, Linear Polarization Variability, and Duplicity of the Luminous B2 Supergiant HD 80077
Knoechel, G., Moffat, A.F.J. **110**, 263
- Radial Velocity Studies of Spectroscopic Binaries with the Objective Prism I: Improved Orbital Elements for Binaries in and near NGC 2516
Gieseking, F., Karimie, M.T. **112**, 179; **49**, 497
- Radial Velocity Studies of Spectroscopic Binaries with the Objective Prism II: Three New Massive Binaries in the Scorpius OB 1 Association
Gieseking, F. **112**, 395; **49**, 673
- X-ray Observations of Single-line Spectroscopic Binaries
Singh, K.P., Naranan, S. **113**, 167
- Contribution to the Study of Composite Spectra. III. Spectrum Binaries: Intermediate Class Between Visual and Spectroscopic Binaries? (Text in French)
Carquillat, J.M., Nadal, R., Ginestet, N., Pédoussaut, A. **115**, 23
- The early B-type eclipsing binary FZCMa (HD 52942): a massive triple system
Moffat, A.F.J., Vogt, N., Vaz, L.P.R., Grønbech, B. **120**, 278
- Contribution to the study of F to M binaries. I. Orbital elements of the double lined spectroscopic binaries HD 47415 and HD 210763
Nadal, R., Carquillat, J.M., Pédoussaut, A., Ginestet, N. **121**, 331; **52**, 293
- IUE spectrophotometry of X Persei (4U 0352+30)
Bernacca, P.L., Bianchi, L., Dorren, J.D., Perryman, M.A.C. **122**, 17
- Spectroscopic orbit of the star HR 96
Hube, D.P. **124**, 151; **53**, 29
- Light variations of the Am star 32 Vir
Bartolini, C., Grilli, F., Parmeggiani, G., Piccioni, A., Silveri, P. **124**, 155; **53**, 139
- A study of UV spectra of ζ Aur/VV Cep stars. IV. System parameters and mass-loss of δ Sge
Reimers, D., Schröder, K.-P. **124**, 241
- Nineteen new spectroscopic binaries and the rate of binary stars among F-M supergiants
Burki, G., Mayor, M. **124**, 256

Statistics of binary stars. I. Multivariate analysis of spectroscopic binaries

- Fofi, M., Maceroni, C., Maravalle, M., Paolicchi, P.* **124**, 313
- A redetermination of the orbit of HD 123299
Elst, E.W., Nelles, B. **125**, 175; **53**, 215
- The runaway Wolf-Rayet star HD 143414: evidence for a low-mass companion
Isserstedt, J., Moffat, A.F.J., Niemela, V.S. **126**, 183
- Four-colour photometry of eclipsing binaries. XVI. Light curves of VV Pyxidis
Clausen, J.V., Nordström, B. **127**, 425; **54**, 149
- Four-colour photometry of eclipsing binaries. XVII. Light curves of DM Virginis
Andersen, J., Clausen, J.V., Nordström, B. **127**, 425; **54**, 161
- Contribution to the study of F, G, K, M binaries. II. Orbital elements of the single-lined spectroscopic binaries HD 69148 and HD 85091
Carquillat, J.M., Nadal, R., Ginestet, N., Pédoussaut, A. **127**, 425; **54**, 187
- Absolute dimensions of eclipsing binaries. II. The early-type semidetached system V Puppis
Andersen, J., Clausen, J.V., Giménez, A., Nordström, B. **128**, 17

Spectroscopy

- On the Use of a Focal-reducer System for Slitless Fieldspectroscopy
Geyer, E.H., Hoffmann, M., Nelles, B. **80**, 248
- A Wavelength Calibration Device for Large Dispersion Spectrographs
Bruning, D.H. **81**, 50
- A Simple Procedure for the Reduction of Echelle Spectrograms
Spite, M. **81**, 365
- Infrared Spectroscopy with a Balloon-borne Michelson Interferometer. I. Instrumentation and Performance
Anderegg, M., Moorwood, A.F.M., Salinari, P., Furniss, I., Jennings, R.E., King, K.J., Towlson, W.A., Venis, T.E. **82**, 86
- Spectroscopic Observations of SS 433 at the Low Amplitude Elongation of the Velocity Curve
Bedogni, R., Braccasi, A., Marano, B., Messina, A. **84**, L4
- A Fabry Perot Spectrometer for Measuring Solar Velocity Fields
Cavallini, F., Ceppatelli, G., Righini, A., Barletti, R. **85**, 255
- Methods for Accurate Photographic Stellar Spectrophotometry Using the Solar Spectrum as Calibration
Lind, J., Dravins, D. **90**, 151
- Ground-Based Observations of Some Stars Classified in the Satellite Ultraviolet with Spectral Particularities
Jaschek, M., Jaschek, C. **91**, 263; **42**, 115
- An Acousto-optical Radiospectrometer System for 22 GHz Region Line Observations
Malkamäki, L.J. **98**, 15
- A Digital Spectrometer for the Westerbork Synthesis Radio Telescope
Bos, A., Raimond, E., van Someren Greve, H.W. **98**, 251
- Optical Design with Aspherical Gratings: the Example of the UV-PRIM Spectrograph
Lemaître, G. **103**, L14
- An Alternative Procedure for Extracting IUE Low Resolution Spectra
Crivellari, L., Morossi, C. **106**, 332
- The Solar Spectrum of O IV, Including Photoexcitation by Fe IX 171.07 Å
Kastner, S.O. **108**, 361

- A Selective Solar Irradiance Spectrometer
Oranje, B.J. **109**, 32
- A Digital Image Processing Method for Automatic Reduction of Echelle Spectrograms
Moreno, V., Llorente de Andrés, F., Jiménez, J. **111**, 260
- The Theoretical KLL + KLM Auger Spectrum of the Free Na Atom
Petrini, D. **111**, 279
- The Maximum Entropy Principle in Two-dimensional Spectral Analysis
Pendrel, J.V., Smylie, D.E. **112**, 181
- A Stable Acousto-optical Spectrometer for Millimeter Radio Astronomy
Masson, C.R. **114**, 270
- Terrestrial O₂ Lines Used as Wavelength References: Comparison of Measurements and Model Computations
Balthasar, H., Thiele, U., Wöhl, H. **114**, 357
- The Width of Echelle Orders in IUE Images as Derived with the Astronomical Image Display and Analysis (AIDA) System in Tübingen
de Boer, K.S., Preussner, P.-R., Grewing, M. **115**, 128
- Near Infrared Spectroscopy of W 51 IRS-2
White, G.J., Phillips, J.P., Williams, P.M., Watt, G.D., Richardson, K.J. **116**, 293
- Non-resonance lines of neutral calcium in the spectra of Arcturus and β Virginis
Smith, G., Lambert, D.L. **117**, 177
- A study of visual double stars with early type primaries. I. Spectroscopic results
Gahn, G.F., Ahlin, P., Lindroos, K.P. **118**, 210; **51**, 143
- Determination of the atmospheric parameters of late-type stars from low resolution spectra
Thévenin, F., Foy, R. **122**, 261
- Notes on the heavily reddened and variable A-type supergiant CD-33° 12119
van Genderen, A.M., Hammerschlag-Hensberge, G., Thé, P.S. **124**, 197
- High resolution ultra-violet observations of alpha Lyrae using the University College London balloon-borne telescope system
Welsh, B.Y., Boksenberg, A., Anderson, B., Towlson, W.A. **126**, 335
- A heterodyne spectrometer for astronomical measurements at 10 micrometers
Rothermel, H., Käufel, H.U., Yu, Y. **126**, 387
- The spectroscopic nature of a sample of faint objects with ultraviolet excess
Kron, R.G., Bònoli, F., Federici, L., Zitelli, V., Vigotti, M. **127**, 29
- Stark broadening of Si II and Si III spectral lines
Dimitrijević, M.S. **127**, 68
- On the rapid spectral variability of Be-stars: high spectral resolution study of γ Cas, ϕ Per, and 59 Cyg
Chalabaev, A., Maillard, J.P. **127**, 279
- The eclipsing dwarf nova OY Carinae. II. Spectroscopy and photometry during quiescence
Schoembs, R., Hartmann, K. **128**, 37
- The UV spectrum of PKS 2251+113 and physical conditions in the Broad Line Region
Dultzin-Hacyan, D. **128**, 148
- A spectroscopic method for calibration of solar extreme ultraviolet instrumentation
Neupert, W.M., Kastner, S.O. **128**, 181
- High rotational velocity of a region around the primary of Algol
Cugier, H., Molaro, P. **128**, 429
- Spectrum Variables**, see also Delta Scuti Stars and other Types of Variables
- Spectrum Variability of the He Weak and He Strong Stars
Pedersen, H. **72**, 379; **35**, 313
- Photoelectric Observations of Stars with Variable H and K Emission Components. III
Blanco, C., Catalano, S., Marilli, E. **73**, 370; **36**, 297
- Periodic Spectral Variability of the Ap Star HR 234
Panek, R.J. **90**, 341
- On the T Tauri nature of the variable star BM Cha
Krautter, J., Mouchet, M. **125**, 378
- Spicules**, see Solar Chromosphere
- Arc measurements of Fe II transition probabilities
Moity, J. **121**, 163; **52**, 37
- Spiral Arms**, see also Density Waves, Galactic Structure, Galaxies, Spiral Galaxies, Stellar Dynamics and Kinematics
- Distribution of Stars and Interstellar Dust Along the Inner Side of the Carina Spiral Feature
Ardeberg, A., Maurice, E. **83**, 383; **39**, 325
- Nonlinear Effects Near the Particle Resonance
Palous, J. **87**, 361
- A Complete CO Map of a Spiral Arm Region in M 31
Boulanger, F., Stark, A.A., Combes, F. **93**, L1
- The Kinematics of the Nuclear Spiral of the Barred Galaxy NGC 1512
Lindblad, P.O., Jörsäter, S. **97**, 56
- Kinematics of Stars and Interstellar Gas Along the Inner Side of the Carina Spiral Feature
Ardeberg, A., Maurice, E. **98**, 9
- Stochastic Self-propagating Star Formation in the Large Magellanic Cloud
Feitzinger, J.V., Glassgold, A.E., Gerola, H., Seiden, P.E. **98**, 371
- The Density Response of a Stellar Disk to Growing Oval Mass Distributions. The Exponential Mass Model in First Order Epicyclic Approximation
Polzin, D., Thielheim, K.O. **101**, 409
- Spin-reversed Accretion as the Cause of Intermittent Spindown in Slow X-ray Pulsars
Wang, Y.-M. **102**, 36
- On the Distribution of Pulsars in the Galactic Plane
del Romero, A., Gómez-González, J. **104**, 83
- Density Wave Theory for Spiral Galaxies: Effects of Resonant Stars at Corotation
Bertin, G., Haass, J. **108**, 265
- Arm Width as a Function of Absolute Luminosity for *bc* and *c* Spiral Galaxies
Block, D.L. **109**, 336
- Can Giant Molecular Clouds Form in Spiral Arms?
Casoli, F., Combes, F. **110**, 287
- The Distribution of H II Regions in External Galaxies. I
Considère, S., Athanassoula, E. **111**, 28
- Optical Study of NGC 6946 (in French)
Peton, A. **114**, 1
- A radio continuum survey of M 31 at 4850 MHz. I. Observations; list of sources
Berkhuijsen, E.M., Wielebinski, R., Beck, R. **117**, 141

- The diffuse gamma radiation of the local spiral arm (Text in German)
Schlosser, W., Feitzinger, J.V. **119**, 42
- The nature of the nebula around BL Lacertae
Rakos, K.D., Fiala, N. **124**, L11
- On the dynamical evolution of spiral galaxies
Bertin, G. **127**, 145
- Spiral Galaxies**, see also Barred Spiral Galaxies, Galaxies, M 31
- An Optical Study of the Galaxy M 101. Derivation of a Mass Model from the Kinematic of the Gas
Comte, G., Monnet, G., Rosado, M. **72**, 73
- Angular Motion of Trapped Stars near the Corotation Circle in Spiral Galaxies
Colin, J. **76**, 356
- Orbits near the Particle Resonance of a Galaxy. I. Numerical Study
Papayannopoulos, T. **77**, 75
- NGC 6872: A Remarkable Barred Spiral
Block, D.L. **79**, L22
- Orbits near the Particle Resonance of a Galaxy. II. Theoretical Study
Papayannopoulos, T. **79**, 197
- The Local Mass-to-light Ratio in Spiral Galaxies
Bosma, A., Van der Kruit, P.C. **79**, 281
- Contributions of the Theory of Spiral Structure. III. The Influence of Homogeneous and Inhomogeneous Halos on the Equilibrium and Stability of Disk Galaxies
Schmidt-Kaler, Th., Wiegandt, R. **82**, 238
- The H I Deficiency of the Virgo Cluster Spirals
Chamaraux, P., Balkowski, C., Gérard, E. **83**, 38
- 21-cm Line Profiles of 40 Sa Spiral Galaxies
Bottinelli, L., Gouguenheim, L., Paturel, G. **86**, 269; **40**, 355
- Neutral Hydrogen Study of 40 Sa Spiral Galaxies
Bottinelli, L., Gouguenheim, L., Paturel, G. **88**, 32
- Contributions to the Theory of Spiral Structure. I. Energy and Lifetime of Density Waves and the Classification of Spiral Galaxies
Feitzinger, J.V., Schmidt-Kaler, Th. **88**, 41
- The Dynamics of the Spiral Galaxy M 81. I. Axisymmetric Models and the Stellar Density Wave
Visser, H.C.D. **88**, 149
- The Dynamics of the Spiral Galaxy M 81. II. Gas Dynamics and Neutral hydrogen Observations
Visser, H.C.D. **88**, 159
- Bar-driven Spiral Structure
Athanassoula, E. **88**, 184
- The Radio Continuum Emission from Spiral Galaxies in Double Systems
Hummel, E. **89**, L1
- Radio Observations of a Complete Sample of Spiral Galaxies at 408 MHz
Gioia, I.M., Gregorini, L. **89**, 252; **41**, 329
- New High Resolution Radio Observations of NGC 4258. II. NGC 4258 as a Spiral Galaxy
van Albada, G.D. **90**, 123
- Bisymmetric Open-spiral Configuration of Magnetic Fields in the Galaxies M 51 and M 81
Sofue, Y., Takano, T., Fujimoto, M. **91**, 335
- Rotation and Mass of NGC 2976
Carozzi-Meyssonier, N. **92**, 189
- The Radio Continuum Properties of Spiral Galaxies
Hummel, E. **93**, 93
- The Giant Spiral Galaxy M 101. VI. The Large Scale Radial Velocity Field
Bosma, A., Goss, W.M., Allen, R.J. **93**, 106
- X-ray Clusters and the Electromagnetic Spectrum of Galaxies
Benford, G., Cavallo, C. **93**, 171
- A Survey of the Distributions of 2.8 cm Radio Continuum in Nearby Galaxies. I. Observations of 16 Spirals
Klein, U., Emerson, D.T. **94**, 29
- Morphology and Kinematics of the Ionized Gas in NGC 2997
Milliard, B., Marcelin, M. **95**, 59
- Surface Photometry of Edge-on Spiral Galaxies. I. A Model for the Three-dimensional Distribution of Light in Galactic Disks
van der Kruit, P.C., Searle, L. **95**, 105
- Surface Photometry of Edge-on Spiral Galaxies. II. The Distribution of Light and Colour in the Disk and Spheroid of NGC 891
van der Kruit, P.C., Searle, L. **95**, 116
- The Radio Continuum Radiation of Spiral Galaxies in Multiple Systems
Hummel, E. **96**, 111
- Optical and Near Infrared Photometry of Spiral Galaxies: M 33, M 74, M 81
Guidoni, U., Messi, R., Natali, G. **96**, 215
- The Inner Regions of the Spiral Galaxy NGC 3310: Evidence for Galactic Cannibalism?
Balick, B., Heckman, T. **96**, 271
- The Kinematics of the Nuclear Spiral of the Barred Galaxy NGC 1512
Lindblad, P.O., Jörsäter, S. **97**, 56
- The Radio Luminosity Function of Spiral Galaxies: Correlations with Aggregation and Hubble Type
Gavazzi, G., Trinchieri, G. **97**, 128
- Effect of the Infall of Matter on the Dynamical Structure and Chemical Evolution of a Spiral Galaxy
Mayor, M., Vigroux, L. **98**, 1
- Limits of the Halo Component in Spiral Galaxies
Terzides, Ch.K. **99**, 144
- Color-Absolute Magnitude Relation for Spiral Galaxies
Visvanathan, N. **100**, L20
- Distribution of Molecular Gas in Three Face-on Galaxies
Rickard, L.J., Palmer, P. **102**, L13
- Light Distribution, Inclination, and Mass Distribution of M 51
Monnet, G., Paturel, G., Simien, F. **102**, 119
- The Giant Spiral Galaxy M 101. VII. Associations of H I Concentrations and H II Complexes
Viallefond, F., Allen, R.J., Goss, W.M. **104**, 127
- Studies of Nearly Face-on Spiral Galaxies. I. The Velocity Dispersion of the H I Gas in NGC 3938
van der Kruit, P.C., Shostak, G.S. **105**, 351
- The Optical Halo Around NGC 253
Beck, R., Hutschenreiter, G., Wielebinski, R. **106**, 112
- On the Sizes of Rings and Lenses in Disk Galaxies
Athanassoula, E., Bosma, A., Crézé, M., Schwarz, M.P. **107**, 101
- A Comparative Study of Computational Methods in Cosmic Gas Dynamics
van Albada, G.D., van Leer, B., Roberts, W.W., Jr. **108**, 76
- The Velocity Field of the Ionized Gas in the Barred Galaxy NGC 925
Marcelin, M., Boulesteix, J., Courtès, G. **108**, 134
- A Survey of the Distribution of λ 2.8 cm Radio Continuum in Nearby Galaxies. II. NGC 6946
Klein, U., Beck, R., Bucilowski, U.R., Wielebinski, R. **108**, 176

Plane Galactic Orbits in Stationary and Time-dependent Rotating Bars

Spreckels, H., Thielheim, K.O. **108**, 206

Density Wave Theory for Spiral Galaxies: Effects of Resonant Stars at Corotation

Bertin, G., Haass, J. **108**, 265

On the Peculiar Motion of the Local Group as Revealed by the *B-V* vs. *HM* Relation for ScI Galaxies

Teerikorpi, P. **109**, 314

Arm Width as a Function of Absolute Luminosity for *bc* and *c* Spiral Galaxies

Block, D.L. **109**, 336

Surface Photometry of Edge-on Spiral Galaxies. IV. The Distribution of Light, Colour, and Mass in the Disk and Spheroid of NGC 7814

van der Kruit, P.C., Searle, L. **110**, 79

The Distribution of H II Regions in External Galaxies. I

Considère, S., Athanassoula, E. **111**, 28

On the Disk Thickness of Spiral Galaxies

Rohlf, K., Wiemer, H.-J. **112**, 116

Study of Spiral Galaxies from 392 New Measurements of 21-cm Line Data

Bottinelli, L., Gouguenheim, L., Paturel, G. **113**, 61

The Galaxy NGC 1566: Distribution and Kinematics of the Ionized Gas

Comte, G., Duquennoy, A. **114**, 7

VLBI Observations of the Core Sources of a Sample of Spiral Galaxies

Hummel, E., Fanti, C., Parma, P., Schilizzi, R.T. **114**, 400

21-cm Line Profiles of 392 Spiral Galaxies

Bottinelli, L., Gouguenheim, L., Paturel, G. **114**, 421; **50**, 101

Lifetime of Spurs in Galaxies

Feitzinger, J.V., Schwerdtfeger, H. **116**, 117

High Frequency Radio Continuum Observations of Bright Spiral Galaxies

Gioia, I.M., Gregorini, L., Klein, U. **116**, 164

Ordered and ergodic motions of stars in galaxies

Contopoulos, G. **117**, 89

The orientation in space of spiral galaxies in the Local Supercluster

Kapranidis, S., Sullivan III, W.T. **118**, 33

On the nature of orbits in realistic bar potentials

Papayannopoulos, T., Petrou, M. **119**, 21

Pairs of spiral galaxies with magnitude differences greater than one

Arp, H., Giraud, E., Sulentic, J.W., Vigier, J.P. **121**, 26

Bulge-halo effects in barred galaxies

Terzides, C., Michalodimitrakis, M. **122**, 231

Rotation curves and masses of galaxies

Lequeux, J. **125**, 394

A survey of the distribution of λ 2.8 cm radio continuum in nearby galaxies. IV. NGC 253

Klein, U., Urbanik, M., Beck, R., Wielebinski, R. **127**, 177

Neutral hydrogen observations of double spiral galaxies. III. NGC 3504/3512, NGC 4085/4088, IC 65/UGC 622, NGC 797/801

van Moorsel, G.A. **127**, 423; **54**, 1

Neutral hydrogen observations of double spiral galaxies. IV. NGC 4618/4625, NGC 4016/4017, NGC 3725/UGC 6528, UGC 725/728, NGC 2336/IC 467

van Moorsel, G.A. **127**, 423; **54**, 19

Stability, see also **Instability**, **Pulsations**

On the Energy Method in the Stellar Stability Problem

Kähler, H. **72**, 55

Remarks on Time Variations and Radiative Stability of the Celestial Masers

Bettwieser, E. **72**, 97

The Stability of Bondi Accretion

Garlick, A.R. **73**, 171

The Stability of Magnetic Interstellar Clouds

Garlick, A.R. **73**, 337

The Effect of Cosmic Ray Screening upon the Stability of Interstellar Clouds

Hartquist, T.W., Oppenheimer, M., Elmegreen, B. **75**, 137

Parametric Instabilities of Commensurable Nonlinear Plasma Waves

Luheshi, M., Stewart, P. **75**, 185

Polynomial Dispersion Relations

Giaretta, D.L. **75**, 273

On the Multiplicity of the Eigenvalues of Nonradial Stellar Oscillations

Gabriel, M. **82**, 8

The Stability of Rotating Spheroidal Stellar Systems

Wiegandt, R. **82**, 177

On the Stability of Age-zero Contact Binaries. I

Hazlehurst, J., Refsdal, S. **84**, 200

Stability of the Sun Against Nonradial Thermal Modes

Saio, H., Cox, J.P., Hansen, C.J. **85**, 263

Stability of White Dwarfs Undergoing Spherically Symmetric Steady-state Accretion

Sienkiewicz, R. **85**, 295

Stability of Accretion Column Flows

Hameury, J.M., Bonazzola, S., Heyvaerts, J. **90**, 359

Stability of Strong Linearly Polarized Electromagnetic Waves in Dense Plasmas

Che, A., Kegel, W.H. **92**, 204

On the Stability and Evolution of Evolved Contact Binaries

Refsdal, S., Stabell, R. **93**, 297

Equilibrium and Stability of Rotating Stellar Cores with Finite Entropy

Glatzel, W., Fricke, K.J., El Eid, M. **93**, 395

The Stability of Solar Coronal Loops with Realistic Photospheric Boundary Conditions

Van Hoven, G., Ma, S.S., Einaudi, G. **97**, 232

Horseshoe Periodic Orbits in the Restricted Problem of Three Bodies for a Sun-Jupiter Mass Ratio

Taylor, D.B. **103**, 288

Vibrational Stability of First Generation Stars

Ibrahim, A., Boury, A., Noels, A. **103**, 390

Vibrational Stability and Critical Mass of He Stars

Noels, A., Masereel, C. **105**, 293

The Stability of Inhomogeneous Axisymmetric Stellar Systems

Wiegandt, R. **106**, 240

On the Thermal Stability of Hot Coronal Loops: The Coupling Between Chromosphere and Corona

Kuin, N.P.M., Martens, P.C.H. **108**, L1

Vibrational Instability of a 3000 M_{\odot} Star and the R 136a Problem

Ledoux, P., Noels, A., Boury, A. **108**, 49

Periodic Orbits in Triaxial Galactic Models

Magnenat, P. **108**, 89

On the Stability and Evolution of Contact Binaries. I

Rahunen, T. **109**, 66

- On the Stability of Age-zero Contact Binaries. II
Hazlehurst, J., Höppner, W., Refsdal, S. **109**, 117
- Unstable Poloidal Magnetic Fields in Stars
Van Assche, W., Tayler, R.J., Goossens, M. **109**, 166
- On the Stability of the Triangular Points in the Elliptic Restricted Problem
Meire, R. **110**, 152
- Super-critical X-ray Luminosities: The Structure and Stability of a Radiation-supported Plasma Layer
Wang, Y.-M. **112**, 24
- A Manifold of Periodic Orbits in the Planar General Three-body Problem with Equal Masses
Davoust, E., Broucke, R. **112**, 305
- The Influence of Buoyancy on the Stability of Jets
Achterberg, A. **114**, 233
- Stability of thermal relaxation oscillations
Barranco, M., Buchler, J.R., Perdang, J. **125**, 6
- Special perturbations of rotating isothermal gas clouds with constant rotational velocity
Schmitz, F. **125**, 333
- Star Formation**, see also Stellar Evolution
- Comparison of the Rates of Formation of Massive Stars and of the Initial Mass Functions in Galaxies of the Local Group
Lequeux, J. **71**, 1
- The YY Orionis Stars in the Chamaeleon T-Association
Appenzeller, I. **71**, 305
- The Sudden Appearance of Stars
Magnan, C. **72**, 18
- Rotation and Star Formation Rate in Protogalaxies
Di Fazio, A., Occhionero, F., Vagnetti, F. **72**, 204
- H₂O in the Galaxy. II. Duration of the Maser Phase and the Galactic Distribution of H₂O Sources
Genzel, R., Downes, D. **72**, 234
- Dust and Young Stars in the Lenticular Galaxy NGC 5102
Danks, A.C., Laustsen, S., van Woerden, H. **73**, 247
- Excitation and Nature of the Bipolar Nebula S 106
Eiroa, C., Elsässer, H., Lahulla, J.F. **74**, 89
- A Constraint on the Influence of Density Waves on the Rate of the Star Formation
Cassé, M., Kunth, D., Scalo, J.M. **76**, 346
- H₂O in W 51 Main: An Expanding Bubble around a Young Massive Star?
Genzel, R., Downes, D., Moran, J.M., Johnston, K.J., Spencer, J.H., Matveyenko, L.I., Kogan, L.R., Kostenko, V.I., Rönnäng, B., Haschick, A.D. **78**, 239
- Star Formation through an Accretion Shock: A Model for H⁺ Blisters
Icke, V. **78**, 352
- New VLBI Maps of H₂O Sources in Different Stages of Evolution
Downes, D., Genzel, R., Moran, J.M., Johnston, K.J., Matveyenko, L.I., Kogan, L.R., Kostenko, V.I., Rönnäng, B. **79**, 233
- A Quantitative Study of the Upper HR Diagram and a New Determination of the Local Initial Mass Function
Lequeux, J. **80**, 35
- Nucleosynthetic Yields and the History of the Stellar Birthrate
Wheeler, J.C., Miller, G.E., Scalo, J.M. **82**, 152
- A Study of Stars in Southern Dust Clouds with Bright Nebulosity
Gahm, G.F., Malmort, A.M. **82**, 295
- Birthrate and Mass Function in the Magellanic Clouds
Dennefeld, M., Tammann, G.A. **83**, 275
- Star Formation in the Inner Galaxy from Near and Far Infrared Observations
Serra, G., Puget, J.L., Ryter, C.E. **84**, 220
- The Nature, Distribution and Evolution of Stellar Populations in the Small Magellanic Cloud
Brück, M.T. **87**, 92
- On the Sequential Formation of Subgroups in OB Associations
Bedijn, P.J., Tenorio-Tagle, G. **88**, 58
- The Effect of Turbulent Viscosity on Stability- and Collapse of a Rotating Protostellar Cloud
Regev, O., Shaviv, G. **89**, 61
- Structure of Molecular Clouds. II. Clouds without Prominent Star Formation
Stenholm, L.G. **89**, 264
- Ultraviolet Studies of the Magellanic Clouds. II. Internal Extinction, Formation of Massive Stars, Comparison with Other Galaxies
Vangioni-Flam, E., Lequeux, J., Maucherat-Joubert, M., Rocca-Volmerange, B. **90**, 73
- Radio Observations of H II Regions in External Galaxies. III. Thermal Emission, H II Regions and Star Formation in 14 Late-type Galaxies
Israel, F.P. **90**, 246
- OH Observations of Molecular Complexes in Orion and Taurus
Baud, B., Wouterloot, J.G.A. **90**, 297
- Numerical Solution of the 1 D Spherical Non Stationary Radiating Shock Using Characteristics. Application to Protostars
Morel, P.J., Baglin, A. **90**, 327
- A Low-luminosity Far Infrared Source in the L 1551 Molecular Cloud
Fridlund, C.V.M., Nordh, H.L., van Duinen, R.J., Aalders, J.W.G., Sargent, A.I. **91**, L1
- The Mass Function for Stars in a Cluster: a Theoretical Derivation
Bhattacharjee, S.K., Williams, I.P. **91**, 85
- Structure of Molecular Clouds: I. Observational Constraints and CO Line Formation
Stenholm, L.G. **91**, 261; **42**, 23
- H I Observations and Star Formation in the Blue Compact Galaxy I Zw 18
Lequeux, J., Viallefond, F. **91**, 269
- Structure of Molecular Clouds. IV. Clouds with Prominent Star Formation
Stenholm, L.G. **92**, 142
- Fragmentation, Fragment Interactions, and the Stellar Mass Spectrum
Bastien, P. **93**, 160
- Radio Continuum Emission from the Cepheus OB3 Molecular Cloud-infrared Source
Harten, R.H., Thum, C., Felli, M. **94**, 231
- A Far-infrared Survey of the Milky Way from Sagittarius to Cygnus: Evidence for Large Scale Variations of the Star Formation Rate and Initial Mass Function
Boissé, P., Gispert, R., Coron, N., Wijnbergen, J.J., Serra, G., Ryter, C., Puget, J.L. **94**, 265
- Infrared Objects Near to H₂O Masers in Regions of Active Star Formation
Moorwood, A.F.M., Salinari, P. **94**, 299
- The Collision of Clouds with a Galactic Disk
Tenorio-Tagle, G. **94**, 338
- Far Infrared Observations of S 255 and S 187
Sargent, A.I., van Duinen, R.J., Nordh, H.L., Aalders, J.W.G. **94**, 377

- Partial Aperture Synthesis of Five Dark Clouds at 1.4 GHz
Falgarone, E., Gilmore, W. **95**, 32
- ESO 255-IG 07, a Compact Group of Interacting Galaxies
Bergvall, N., Ekman, A., Lauberts, A. **95**, 266
- Possible Association of a WC-OVI Star with an Active Site of Star Formation
Pitault, A. **97**, L5
- Morphology and Spectral Properties of Seven Blue Systems of Interacting Galaxies
Bergvall, N. **97**, 302
- Thermal Evolution of a Contracting Hydrogen Gas Cloud
Hasegawa, T., Yoshii, Y., Sabano, Y. **98**, 186
- A Study of the S 155 A—Cep B Cloud and Its Relation to Cepheus OB 3 Association
Panagia, N., Thum, C. **98**, 295
- Luminous Late-type Stars in Reflection Nebulae and/or in Very Young Stellar Clusters
Gahm, G.F., Hultqvist, L., Liseau, R. **98**, 341
- Stochastic Self-propagating Star Formation in the Large Magellanic Cloud
Feitzinger, J.V., Glassgold, A.E., Gerola, H., Seiden, P.E. **98**, 371
- Infrared Reflection Nebulae in S 106 and NGC 7538 E
Tokunaga, A.T., Lebofsky, M.J., Rieke, G.H. **99**, 108
- Infrared Objects Near to H₂O Masers in Regions of Active Star Formation. II. Survey and 1–20 μ m Observations of Southern Sources
Moorwood, A.F.M., Salinari, P. **102**, 197
- CO ($J=2\rightarrow 1$) Observations of Southern H II Regions
de Graauw, T., Lidholm, S., Fitton, B., Beckman, J., Israel, F.P., Nieuwenhuijzen, H., Vermue, J. **102**, 257
- Star Formation and Extinction in Extragalactic H II Regions
Lequeux, J., Maucherat-Joubert, M., Deharveng, J.M., Kunth, D. **103**, 305
- Preliminary Stellar Photographic Photometry in the Sculptor Dwarf Irregular Galaxy (SDIG)
Lequeux, J., West, R.M. **103**, 319
- On a Gap in the Stellar Mass Distribution
Giannuzzi, M.A. **104**, 81
- The Giant Spiral Galaxy M 101. VII. Associations of H I Concentrations and H II Complexes
Viallefond, F., Allen, R.J., Goss, W.M. **104**, 127
- Studies of the Magellanic Clouds. III. Colours, Gas and Past Star Formation Rate
Rocca-Volmerange, B., Lequeux, J., Maucherat-Joubert, M. **104**, 177
- The Analysis of Solar Limb Observations. II. Geometrical Smearing
Durrant, C.J., Kneer, F., Maluck, G. **104**, 211
- Centimetre Wavelengths Radio Studies of Clumpy Irregular Galaxies
Heidmann, J., Klein, U., Wielebinski, R. **105**, 188
- Gravitationally Driven Instabilities in Shock Compressed Gas Layers
Welter, G.L. **105**, 237
- Bursts of Star Formation in the Galactic Centre
Loose, H.H., Krügel, E., Tutukov, A. **105**, 342
- Hot Stars in the Bulge of M 31: Upper Limit to the Star Formation Rate
Deharveng, J.M., Joubert, M., Monnet, G., Donas, J. **106**, 16
- The Radio H II Regions Associated with Cep A
Hughes, V.A., Wouterloot, J.G.A. **106**, 171
- Formaldehyde Emission from DR21(OH)
Wilson, T.L., Martin-Pintado, J., Gardner, F.F., Henkel, C. **107**, L10
- Radio Observations of Pre-main-sequence Stars: Results and Interpretation
Bertout, C., Thum, C. **107**, 368
- On the Infrared Sources 1 and 2 in NGC 7538
Elsässer, H., Birkle, K., Eiroa, C., Lenzen, R. **108**, 274
- Star Formation in the NH₃ Cloud of the NGC 2071 Region
Calamai, G., Felli, M., Giardinelli, S. **109**, 123
- Radio, Infrared, and Optical Observations of Compact H II Regions. IV. The Nebula S235B
Krassner, J., Pipher, J.L., Sharpless, S., Herter, T. **109**, 223
- The Initial Mass Function for Young Open Clusters
Tarrab, I. **109**, 285
- Near-infrared Slit Scans of Molecular Cloud Sources. II
Dyck, H.M., Staude, H.J. **109**, 320
- Metallicity Effect and λ 2.4 μ m Excess in the Galactic Disk
Guiderdoni, B., Rocca-Volmerange, B. **109**, 355
- Chemical Evolution of Irregular Galaxies
Chiosi, C., Matteucci, F. **110**, 54
- Circumstellar Shells in M 17
Chini, R. **110**, 332
- On the Radial Colour Variation in Nine Young Populous Clusters in the LMC
Meylan, G. **110**, 348
- New Infrared Objects Towards Southern Type I OH and H₂O Masers
Braz, M.A., Epchtein, N. **111**, 91
- Ammonia Observations of Cold Cloud Cores
Ungerechts, H., Walmsley, C.M., Winnewisser, G. **111**, 339
- Recent Star-forming Activity in the Clumpy Irregular Galaxy NGC 7673
Duflot-Augarde, R., Alloin, D. **112**, 257
- Near-infrared Sources in the NGC 6334 Molecular Cloud
Persi, P., Ferrari-Toniolo, M. **112**, 292
- The Mass Function of Blue Stars, the Production Rate of Lyphotons, and the Rate of Star Formation in M 33
Berkhuijsen, E.M. **112**, 369
- The H II Region – Molecular Cloud Complex Sh 2–269: An Optical and Millimeter Wavelength Study
Heydari-Malayeri, M., Testor, G., Baudry, A., Lafon, G., de la Noë, J. **113**, 118
- Temperatures and Scales of Giant Cloud Complexes in the Spiral Galaxy IC 342
Ho, P.T.P., Martin, R.N., Ruf, K. **113**, 155
- Formaldehyde Absorption in S 128
Heske, A., Wendker, H.J. **113**, 170
- Multiaperture Photometry of Galaxies. II. Near-infrared Observations of Six Isolated Objects
Brosch, N., Isaacman, R. **113**, 231
- Shock Induced Star Formation: The Effects of Magnetic Fields and Turbulence
Welter, G.L., Nepveu, M. **113**, 277
- Accurate Optical Positions of M 82 Knots
Bettoni, D., Galletta, G. **113**, 344
- Formaldehyde Absorption Towards OH Sources
Forster, J.R., Boland, W. **114**, 109
- 3D Models for Self-gravitating, Rotating Magnetic Interstellar Clouds
Dorfi, E. **114**, 151

- On the Difference Between the Initial Mass Function of Single Stars and of Primaries of Binaries
Vanbeveren, D. **115**, 65
- Infrared Emission and Star Formation in NGC 5253
Moorwood, A.F.M., Glasz, I.S. **115**, 84
- Far Infrared Observations of a Star Forming Region in Serpens
Nordh, H.L., van Duinen, R.J., Sargent, A.I., Fridlund, C.V.M., Aalders, J.W.G., Beintema, D. **115**, 308
- The Giant Spiral Galaxy M 101. VIII. Star Formation in H I-H II Associations
Viallefond, F., Goss, W.M., Allen, R.J. **115**, 373
- Lifetime of Spurs in Galaxies
Feitzinger, J.V., Schwerdtfeger, H. **116**, 117
- CO $J=3 \rightarrow 2$ and Submillimetre Continuum Observations of Two Molecular Outflow Sources
Phillips, J.P., White, G.J., Ade, P.A.R., Cunningham, C.T., Richardson, K.J., Robson, E.I., Watt, G.D. **116**, 130
- Radio Continuum Emission: A Tracer for Star Formation
Klein, U. **116**, 175
- A New Near-infrared Source in the Molecular Cloud Associated with S106
Hofmann, R.G., Larson, H.P. **116**, 179
- Structure of molecular clouds. VI. The accuracy of the standard analysis
Stenholm, L.G. **117**, 41
- High density molecular gas in the ρ Ophiuchi cloud
Martin-Pintado, J., Wilson, T.L., Gardner, F.F., Henkel, C. **117**, 145
- On the inner ring of H II regions in NGC 3351
Alloin, D., Nieto, J.-L. **117**, 172; **50**, 491
- Star formation in Bok globules and low-mass clouds. I. The cometary globules in the Gum Nebula
Reipurth, B. **117**, 183
- Neutral hydrogen in the Cas OB6 association
Braunsfurth, E. **117**, 297
- A survey of the distribution of λ 2.8 cm radio continuum in nearby galaxies. III. A small sample of irregular and blue compact galaxies
Klein, U., Gräve, R., Wielebinski, R. **117**, 332
- New H₂O masers in the galactic center region
Güsten, R., Downes, D. **117**, 343
- Calibrated B, V surface photometry of X-ray cD galaxies
Valentijn, E.A. **118**, 123
- Detection of large infrared polarization from L 1551 IRS 5
Nagata, T., Sato, S., Kobayashi, Y. **119**, L1
- A two-micron survey of southern Herbig-Haro objects
Reipurth, B., Wamsteker, W. **119**, 14
- Gravitational collapse and fragmentation of isothermal, non-rotating, cylindrical clouds
Bastien, P. **119**, 109
- Photometric membership in the very young open clusters NGC 457, NGC 7380, and IC 1805
Baade, D. **119**, 164; **51**, 235
- The origin of the nonthermal radio emission in normal disk galaxies
Kennicutt, R. **120**, 219
- An exact solution for an isothermal gas cloud with fast differential rotation
Schmitz, F. **120**, 234
- Observations of the interacting galaxy pair NGC 4490/85
Klein, U. **121**, 150
- TW Hya: a T Tauri star far from any dark cloud
Rucinski, S.M., Krautter, J. **121**, 217
- Stochastic star formation and chemical evolution of dwarf irregular galaxies
Matteucci, F., Chiosi, C. **123**, 121
- Clumping in Orion KL: 2-arcsecond maps of ammonia
Pauls, T.A., Wilson, T.L., Bieging, J.H., Martin, R.N. **124**, 23
- The spectral appearance of active galactic nuclei undergoing bursts of star formation
Krügel, E., Tutukov, A., Loose, H. **124**, 89
- The Cygnus X region. XIV. The radio continuum of the North America-Pelican nebulae
Wendker, H.J., Benz, D., Baars, J.W.M. **124**, 116
- The H₂O/OH maser 342.01 + 0.25: a case of supernova-induced star formation?
Sandell, G., Scalise Jr, E., Braz, M.A. **124**, 139
- Catalog of magnetic field measurements
Didelon, P. **124**, 154; **53**, 119
- Structure of molecular clouds. VII. Energy balance in clouds with star formation (Type IIb)
Stenholm, L.G. **124**, 247
- 3-D simulations of the collapse of nonspherical interstellar clouds
Rozyczka, M. **125**, 45
- Infrared objects near H₂O masers in regions of active star formation. III. Evolutionary phases deduced from IR recombination line and other data
Moorwood, A.F.M., Salinari, P. **125**, 342
- Non-metastable ammonia absorption toward compact H II regions
Wilson, T.L., Mauersberger, R., Walmsley, C.M., Batrla, W. **127**, L19
- Mid-infrared maps of the Orion molecular cloud core
Lee, T.J., Beattie, D.H., Geballe, T.R., Pickup, D.A. **127**, 417
- Clumping in molecular clouds. The region between OMC1 and 2
Batrla, W., Wilson, T.L., Bastien, P., Ruf, K. **128**, 279
- The interaction of supernova shockfronts and nearby interstellar clouds
Krebs, J., Hillebrandt, W. **128**, 411
- Star Identification**
- Microfiche Edition of CSI
Ochsenbein, F., Bischoff, M., Egret, D. **95**, 395; **43**, 259
- Stark Effect**, see Line Broadening
- Estimated Stark widths and shifts of neutral atom and singly charged ion resonance lines
Lakićević, I.S. **127**, 37
- Stark broadening of Si II and Si III spectral lines
Dimitrijević, M.S. **127**, 68
- Stark broadening of hydrogen lines: new results for the Balmer lines and astrophysical consequences
Stehlé, C., Mazure, A., Nollez, G., Feautrier, N. **127**, 263
- Stars**, see stellar ...
- Model-atmosphere analysis of high-dispersion spectra of four red giants and supergiants
Kovács, N. **120**, 21
- Automated photographic photometry of stars in globular clusters
Buonanno, R., Buscema, G., Corsi, C.E., Ferraro, I., Iannicola, G. **126**, 278
- Stars, individual**

ϕ Her

Absorption Line Symmetries for Two HgMn Stars
Rice, J.B., Wehlau, W.H. **106**, 7

AB Aur

AB Aurigae and its variable hydrogen lines
Finkenzeller, U. **124**, 157

The dust envelope of the Herbig Ae star, AB Aur
Catala, C. **125**, 313

AC Boo

Photometric observations of AC Boo
Schieven, G., Morton, J.C., McLean, B.J., Hughes, V.A. **123**, 360; **52**, 463

Acturus

Theoretical Temperature Minima for Arcturus (K 2 IIIp), a Possible Explanation of the Wilson Bappu Effect
Ulmschneider, P., Schmitz, F., Hammer, R. **74**, 229

AD And

Revised Photometric Elements of Five Eclipsing Binaries
Giuricin, G., Mardirossian, F. **102**, 282; **45**, 499

ADS 11871

Orbital Elements of the Visual Binary Star ADS 11871 = β 648, Obtained by Two Methods
Pannunzio, R., Delgrosso, A. **83**, 385; **39**, 423

ADS 1737

Éléments Orbitaux des Etoiles Doubles Visuelles ADS 1737, ADS 2446, ADS 2612 et ADS 2799
Scardia, M. **102**, 281; **45**, 431

ADS 1833

Redressement des orbites des couples visuels ADS 1833 et 6871 AB
Valbousquet, A. **89**, 251; **41**, 295

ADS 2446

Éléments Orbitaux des Etoiles Doubles Visuelles ADS 1737, ADS 2446, ADS 2612 et ADS 2799
Scardia, M. **102**, 281; **45**, 431

ADS 2612

Éléments Orbitaux des Etoiles Doubles Visuelles ADS 1737, ADS 2446, ADS 2612 et ADS 2799
Scardia, M. **102**, 281; **45**, 431

ADS 2799

Éléments Orbitaux des Etoiles Doubles Visuelles ADS 1737, ADS 2446, ADS 2612 et ADS 2799
Scardia, M. **102**, 281; **45**, 431

ADS 3182

Revised Orbital Elements of Visual Binary Stars ADS 3182 and ADS 3483 (Text in French)
Scardia, M. **112**, 179; **49**, 503

ADS 3483

Revised Orbital Elements of Visual Binary Stars ADS 3182 and ADS 3483 (Text in French)
Scardia, M. **112**, 179; **49**, 503

ADS 6871

Redressement des orbites des couples visuels ADS 1833 et 6871 AB
Valbousquet, A. **89**, 251; **41**, 295

AE Aqr

Image Tube Spectroscopic Studies of Rapid Variables. IV. Spectroscopic and Photometric Observations of AE Aquarii
Chincarini, G., Walker, M.F. **104**, 24

AE Phe

Determination of Parameters of W UMa Systems. I: AE Phe, AQ Tuc, 44 i Boo
Maceroni, C., Milano, L., Russo, G., Sollazzo, C. **102**, 279; **45**, 187
 Observations and Analysis of the Light Curve of AE Phoenixis in 1978
Walter, K. **109**, 107

AE 1

Spectroscopic and Photometric Investigations of a Helium-rich Variable
Westin, B.A.M. **81**, 74

AG Car

AG Car: A Galactic S Dor Variable
Wolf, B., Stahl, O. **112**, 111

AG Dra

IUE observations of the high velocity symbiotic star AG Draconis during active phase
Viotti, R., Ricciardi, O., Ponz, D., Giangrande, A., Friedjung, M., Cassatella, A., Baratta, G.B., Altamore, A. **119**, 285

AH Vel

Radius, Luminosity and Pulsation Mode of the δ Cephei Star AH Vel
Gieren, W. **82**, 393; **39**, 153

AH Vir

Light curves and elements of AH Virginis
Niarchos, P.G. **124**, 151; **53**, 13

AI Phe

Orbital Elements and Dimensions of Eclipsing Binary AI Phe
Imbert, M. **75**, 261; **36**, 453

AI Vel

On the Oscillations of AI Velorum
Simon, N.R. **74**, 30

Algol

Orbital Inclination and Masses Newly Determined from the Triple System Algol
Bonneau, D. **80**, L11
 Geometry and Dynamics of the Algol System
Söderhjelm, S. **89**, 100
 High rotational velocity of a region around the primary of Algol
Cugier, H., Molaro, P. **128**, 429

AM Her

Ultraviolet Observations of AM Herculis

Tanzi, E.G., Tarengi, M., Treves, A., Howarth, I.D., Willis, A.J., Wilson, R. **83**, 270

AntaresCollisionless Perpendicular Shocks: Applications to Solar Type II Radio Bursts and the Antares (α Sco) B Radio Emission

Klinkhamer, F.R., Kuijpers, J. **100**, 291

AQ Tuc

Determination of Parameters of W UMa Systems. I: AE Phe, AQ Tuc, 44 i Boo

Maceroni, C., Milano, L., Russo, G., Sollazzo, C. **102**, 279; **45**, 187

AR Dra

Light Curves and Elements of AR Draconis

Broglia, P., Conconi, P. **76**, 368; **37**, 487

AR Lac

Infrared Observations of Binary Stars. II

Needham, J.D., Phillips, J.P., Selby, M.J., Sanchez Magro, C. **83**, 370

Ultraviolet observations of AR Lacertae

Kızıloğlu, Ü., Derman, E., Ögelman, H., Tokdemir, F. **123**, 17

AT Peg, DM Per

Revised Photometric Elements of Seven SD-Systems

Giuricin, G., Mardirossian, F., Predolin, F. **95**, 395; **32**, 251

AU Mon

Photoelectric Observations of the Variable Star AU Monocerotis

Lorenzi, L. **85**, 267; **40**, 271

Mathematical Analysis of Some Photometric Peculiarities of AU Monocerotis

Lorenzi, L. **85**, 342

AW Cam

Lightcurve synthesis of the semi-detached binaries LT Her, WX Eri, AW Cam

Russo, G., Milano, L. **121**, 331; **52**, 311

AZ Cas

Photoelectric Observations of the Long-period Eclipsing System AZ Cassiopeiae

Tempesti, P. **81**, 389; **39**, 115

BB Peg

Two-color Photoelectric Observations of the Eclipsing Binary BB Peg

Cerruti-Sola, M., Scaltriti, F. **84**, 269; **40**, 85

BB Peg: A WUMa-W System with a High Degree of Overcontact

Cerruti-Sola, M., Milano, L., Scaltriti, F. **101**, 273

BC Dra

The Period and Photometry of BC Draconis

Szabados, L., Stobie, R.S. **107**, 415; **47**, 541

BD + 16°2356

BD + 16°2356, an RRc Lyr Variable

Oja, T. **103**, 339

BD Pav

BD Pavonis: a unique cataclysmic variable

Barwig, H., Schoembs, R. **124**, 287

BD + 10°2179

Mass Loss from Extreme Helium Stars. Detailed UV-line Fits for HD 160641, BD -9°4395 and BD + 10°2179

Hamann, W.-R., Schönberner, D., Heber, U. **116**, 273

BD + 28°1494

The Delta Scuti Variable BD + 28°1494

Broglia, P., Conconi, P. **100**, 201

BD-3°2179

Non-thermal phenomena in the atmosphere of hot subdwarfs: X-ray upper limit for BD-3°2179

D'Antona, F., Rossi, L., Viotti, R. **122**, 339

BD + 33°2642

BD + 33°2642: A Galactic Halo Blue Star Observed by IUE

Stalio, R., Franco, M.L. **84**, 369

BD + 61154

On the Balmer Emission Lines of the Herbig Be Star HD 200775

Köppen, J., Finkenzeller, U., Mundt, R., Beltrametti, M. **112**, 174

BD-9°4395

Mass Loss from Extreme Helium Stars. Detailed UV-line Fits for HD 160641, BD -9°4395 and BD + 10°2179

Hamann, W.-R., Schönberner, D., Heber, U. **116**, 273

Betelgeuse

The Radio Emission of Betelgeuse

Altenhoff, W.J., Oster, L., Wendker, H.J. **73**, L21

Multicolor Linear Polarimetry of Betelgeuse and Antares

Tinbergen, J., Greenberg, J.M., de Jager, C. **95**, 215

Radio Emission and Chromosphere of Betelgeuse

Wischniewski, E., Wendker, H.J. **96**, 102

Observations of the Brightness Structure of α Orionis

Ricort, G., Aime, A., Vernin, J., Kadiri, S. **99**, 232

BH Dra

Revised Photometric Elements of Five Eclipsing Binaries

Giuricin, G., Mardirossian, F. **102**, 282; **45**, 499

BH Vir

The Variable Light Curve of BH Virginis

Hoffmann, M. **107**, 415; **47**, 561

BL TelA Discussion on Three Yellow Variable Supergiants in and Near the Cepheid Instability Strip: V 810 Cen (= HD 101947), Tr. 27-102 (= HD 159378) and BL Tel (F), Based on *VBLUW* Photometry and the Long-period Cepheids Absence in the Galaxy

van Genderen, A.M. **88**, 77

VBLUW photometry of the high-latitude, eclipsing system BL Tel

van Genderen, A.M. **119**, 265

BM Cha

On the T Tauri nature of the variable star BM Cha

Krautter, J., Mouchet, M. **125**, 378

- BM Eri**
The possible long-period eclipsing binary BM Eri
Ahlin, P., Sundman, A. **125**, 221
- Boss 1985**
Boss 1985: mass loss investigation based on IUE spectra
Che, A., Reimers, D. **127**, 227
- BPM 11668**
Ultraviolet carbon lines in the spectrum of the white dwarf BPM 11668
Wegner, G. **128**, 258
- BR Cyg**
Revised Photometric Elements of the Eclipsing Binary BR Cyg
Giuricin, G., Mardirossian, F. **96**, 409
- BR Mus**
BR Muscae: A New Early-type Contact Binary
Clariá, J.J., Lapasset, E. **114**, 419; **50**, 13
- BS Dra**
Two-Colour Photometry of Eclipsing Binary BS Dra
Güdür, N., Gülmen, Ö., İbanoglu, C., Bozkurt, S. **73**, 365; **36**, 65
- BS Vul**
Photoelectric Photometry of the Eclipsing Binary BS Vul
Bernardi, C. de, Scaltriti, F. **71**, 270; **35**, 63
- BV Dra**
The Visual Double W UMa Binary BV and BW Draconis
Geyer, E.H., Hoffmann, M., Karimie, M.T. **108**, 416; **48**, 85
Determination of parameters of W UMa systems. IV: BV Dra, BW Dra, EM Lac, SW Lac
Maceroni, C., Milano, L., Russo, G. **119**, 325; **51**, 435
- BW Dra**
The Visual Double W UMa Binary BV and BW Draconis
Geyer, E.H., Hoffmann, M., Karimie, M.T. **108**, 416; **48**, 85
Determination of parameters of W UMa systems. IV: BV Dra, BW Dra, EM Lac, SW Lac
Maceroni, C., Milano, L., Russo, G. **119**, 325; **51**, 435
- BW Vul**
The Pulsation of the Outer Layers of the Beta Cephei-type Variable BW Vul
Burger, M., de Jager, C., van den Oord, G.H.J., Sato, N. **107**, 320
- BY Dra**
Duplicity in the Solar Neighborhood. I. A new Spectroscopic Orbit for BY Draconis
Lucke, P.B., Mayor, M. **92**, 182
- C 128-7**
The Cool DA White Dwarf G 128-7: Atmospheric Parameters and Evolutionary Consequences
Wehrse, R., Liebert, J. **83**, 184
- Capella**
Phase Effect Detection at the CERGA Stellar Interferometer, Application to Capella's Orbital Motion
Koechlin, L., Bonneau, D., Vakili, F. **80**, L13
- Theoretical Stellar Chromospheres of Late Type Stars. III. Models for Procyon, Capella, Pollux, and 70 Ophiuchi A
Schmitz, F., Ulmschneider, P. **84**, 191
- CC Com**
Determination of Parameters of W UMa Systems. III: CC Com, YY Eri, V502 Oph and TY Pup
Maceroni, C., Milano, L., Russo, G. **111**, 212; **49**, 123
- CD Tau**
Two Colour Photometry of the Eclipsing Binary CD Tauri
Gülmen, Ö., İbanoglu, C., Güdür, N., Bozkurt, S. **85**, 265; **40**, 145
- Cen X-3**
The Accretion Picture of Cen X-3 as Inferred from One Month of Continuous X-ray Observations
Bonnet-Bidaud, J.M., van der Klis, M. **73**, 90
Characteristics of the Cen X-3 Neutron Star from Correlated Spin-up and X-ray Luminosity Measurements
van der Klis, M., Bonnet-Bidaud, J.M., Robba, N.R. **88**, 8
Optical Spectroscopy of Centaurus X-3
Mouchet, M., Ilovaisky, S.A., Chevalier, C. **90**, 113
Optical photometry of massive X-ray binaries: Cen X-3/V779 Cen
van Paradijs, J., Lub, J., Pel, J.W., Pakull, M., van Amerongen, S. **124**, 294
- Cen X-4**
VBLUW Photometry of the Symbiotic High-latitude, Eclipsing System V 748 Cen (= Cen X-4?)
van Genderen, A.M. **73**, 183
- CG And**
The Short Period Radial Velocity Variability of the Si Star CG And (HD 224801)
Rice, J.B. **84**, 359
- CH Cyg**
Spectroscopic Observations of CH Cygni in 1977-1979
Faraggiana, R. **84**, 366
The Ultraviolet Spectrum of CH Cygni During the Outburst Started in 1977
Hack, M., Selvelli, P.L. **107**, 200
Radial Velocities of CH Cygni During the Outburst Started in 1977
Hack, M., Rusconi, L., Sedmak, G., Engin, S., Yilmaz, N. **113**, 250
The symbiotic star CH Cyg: the occasional transition from an unstable to a stable accretion disk
Duschl, W.J. **119**, 248
- CI Cyg**
A Spectroscopic Study of CI Cygni: The S-process Episode
Audouze, J., Bouchet, P., Fehrenbach, Ch., Wosczyk, A. **93**, 1
Spectrophotometric Observations of CI Cyg in 1979
Iijima, T. **94**, 290
Observations spectroscopiques de CI Cygni
Fehrenbach, C., Huang Chang Chun **104**, 171; **46**, 257
CI Cyg: The Stage of Case C Mass Transfer
Iijima, T. **116**, 210

Cir X-1

Binary Model of Circinus X-1. I. Eccentricity from Combined X-ray and Radio Observations

Murdin, P., Jauncey, D.L., Haynes, R.F., Lerche, I., Nicolson, G.D., Holt, S.S., Kaluzienski, L.J. **87**, 292

Binary Model of Circinus X-1. II. Radio Emission

Haynes, R.F., Lerche, I., Murdin, P. **87**, 299

High-energy Inverse Compton Gamma Rays from Cyg X-3 and Cir X-1?

Schlickeiser, R. **94**, 229

CN Ori

Photometric Observations of CN Orionis

Schoembs, R. **115**, 190

CO Aur

The double-mode Cepheid CO Aur

Mantegazza, L. **118**, 321

CoD - 35° 10525

S CrA and CoD - 35° 10525, Two Bright Young Stars

Bertout, C., Carrasco, L., Mundt, R., Wolf, B. **107**, 412; **47**, 419

CPD 26°389

On the Radial Velocity of the Central Star of NGC 1360

Wehmeyer, R., Kohoutek, L. **78**, 39

CPD 46°3093

Fine Analysis of the Intermediate Helium-star CPD-46°3093

Groote, D., Kaufmann, J.P., Lange, A. **114**, 420; **50**, 77

CPD-46° 3093

UV Observations of the Intermediate Helium Star CPD-46° 3093

Heber, U., Hunger, K. **101**, 269

CPD-52°9243

The Strongly Polarized P Cygni Star with Infrared Excess CPD-52°9243

Swings, J.P. **98**, 112

CQ Aur

Photoelectric Observations of Three RS CVn-type Eclipsing Binaries: VV Mon, CQ Aur, and RU Cnc

Scaltriti, F. **72**, 378; **35**, 291

1977-78 and 1978-79 Photoelectric Light Curves of the RS CVn-Type Binaries VV Mon, RU Cnc and CQ Aur

Cerruti-Sola, M., Scaltriti, F., Blanco, C., Catalano, S., Marilli, E., Rodonò, M., Strazzulla, G., Chambliss, C.R. **91**, 381; **42**, 245

CQ Cep

CQ Cephei. Is the period really changing?

Walker, E.N., Lloyd, C., Pike, C.D., Stickland, D.J., Zuiderwijk, E.J. **128**, 394

CQ UMa

The Light Variations of the Ap Star CQ UMa

Pavlovski, K. **76**, 362

Cyg OB 2 No. 12

Radio Emission from Cyg OB 2 No. 12

Wendker, H.J., Altenhoff, W.J. **92**, L5

Cyg OB2 No. 12

Infrared Energy Distribution of Cyg. OB2 No. 12

Persi, P., Ferrari-Toniolo, M. **111**, L7

Cyg X-1

Cygnus X-1 - a Neutron Star Surrounded by a Massive Disk?

Kundt, W. **80**, L7

Radio Observations of Cyg X-1 During the 1977 Campaign

Woodsworth, A.W., Higgs, L.A., Gregory, P.C. **84**, 379

A Critique of the Polarimetric Evidence on the Nature of Cygnus X-1

Simmons, J.F.L., Aspin, C., Brown, J.C. **91**, 97

On the Phase-locked Polarization Variations in Cygnus X-1

Kemp, J.C. **91**, 108

Infrared Photometry of HDE 226868 (Cyg X-1) from 2.3 to 10 μ : Mass Loss Rate

Persi, P., Ferrari-Toniolo, M., Grasdalen, G.L., Spada, G. **92**, 238

Search for γ -radiation from Extragalactic Objects Using a Likelihood Method

Pollock, A.M.T., Bignami, G.F., Hermsen, W., Kanbach, G., Lichti, G.G., Masnou, J.L., Swanenburg, B.N., Wills, R.D. **94**, 116

The Inclination of the Orbital Plane of Cygnus X-1. A Monte Carlo Study

Daniel, J.-Y. **94**, 121

Cyg X-1: A Massive Neutron Star?

Goldman, I. **97**, 219

The Hard X-ray Spectrum of Cygnus X-1

Steinle, H., Voges, W., Pietsch, W., Reppin, C., Trümper, J., Kendziorra, E., Staubert, R. **107**, 350

Cyg X-2

The X-ray Flux Variations of Cygnus X-2

Bonnet-Bidaud, J.M., van der Klis, M. **116**, 232

Cyg X3

34.1 Day Periodicity in Cyg X-3

Molteni, D., Rapisarda, M., Robba, N.R., Scarsi, I. **87**, 88

High-energy Inverse Compton Gamma Rays from Cyg X-3 and Cir X-1?

Schlickeiser, R. **94**, 229

A Change in Light Curve Asymmetry and the Ephemeris of Cygnus X-3

van der Klis, M., Bonnet-Bidaud, J.M. **95**, L5

The Cycle-to-cycle Variability of Cygnus X-3

van der Klis, M., Bonnet-Bidaud, J.M. **114**, 422; **50**, 129

A search for very high energy gamma-ray transients from Cygnus X-3 and PSR 0531

Weekes, T.C. **121**, 232

A search for periodicities in the radio flaring of Cyg X-3

Woodsworth, A.W. **122**, 322

Ultra high energy gamma rays from Cygnus X3

Dowthwaite, J.C., Gibson, A.I., Harrison, A.B., Kirkman, I.W., Lotts, A.P., Macrae, J.H., Orford, K.J., Turver, K.E., Walmsley, M. **126**, 1

DI Cep

Short Term Variations in the Spectrum of the T Tauri Star DI Cep

Bastian, U., Mundt, R. **78**, 181

DI Peg

Revised Photometric Elements of the Eclipsing Binary DI Peg
Mardirossian, F., Predolin, F., Giuricin, G. **91**, 254

DM Per

Photometric observations and analysis of the eclipsing binary DM Persei
Sezer, C. **128**, 260; **54**, 193

DM Vir

Four-colour photometry of eclipsing binaries. XVII. Light curves of DM Virginis
Andersen, J., Clausen, J.V., Nordström, B. **127**, 425; **54**, 161

DQ Cep

DQ Cephei, a Delta Scuti Star of constant variability
Peña, J.H., Peniche, R., Margrave, T.E., Hobart, M.A., González, S.F. **118**, 209; **51**, 71

DR Tau

On the Brightening of the Pre-main-sequence Star DR Tau
Chavarría, K.C. **79**, L18
Spectroscopic Evidence of Strong Mass Flow Variations in the Envelope of the T Tauri Star DR Tau
Appenzeller, I., Krautter, J., Smolinski, J., Wolf, B. **86**, 113
Surprising DR Tauri
Krautter, J., Bastian, U. **88**, L6

Dra

A redetermination of the orbit of HD 123299
Elst, E.W., Nelles, B. **125**, 175; **53**, 215

EE Aqr

Revised Photometric Elements of the Eclipsing Binary EE Aquarii
Russo, G., Sollazzo, C. **107**, 197

EH Lib

Photometry of the Dwarf Cepheids SZ Lyn and EH Lib
Garrido, R., Alfaro, E.J., Quintana, J.M., Saez, M. **73**, 365; **36**, 51

EK TrA

EK Trianguli Australis, a New SU UMa Type Dwarf Nova
Vogt, N., Semeniuk, I. **89**, 223

EM Lac

Determination of parameters of W UMa systems. IV: BV Dra, BW Dra, EM Lac, SW Lac
Maceroni, C., Milano, L., Russo, G. **119**, 325; **51**, 435

ER Ori

Determination of Parameters of W UMa Systems. II: TW Cet, S Ant, U Peg, Er Ori
Russo, G., Sollazzo, C., Maceroni, C., Milano, L. **106**, 378; **47**, 211

ER Vul

Photometry Observations and Light Curve Analysis of the Peculiar System ER Vulpeculae
Al-Naimiy, H.M.K. **95**, 209; **43**, 85

ET And

Investigation of IUE spectra of the Cp star ET And (HD 219749)
Barylak, M., Rakos, K.D. **127**, 366

EV Lac

Starspots and stellar flares on EV Lac and YZ CMi
Pettersen, B.R., Kern, G.A., Evans, D.S. **123**, 184

EX Hya

Periodic and Secular Variations in the Lightcurve of Dwarf Nova EX Hydrae
Vogt, N., Krzeminski, W., Sterken, C. **85**, 106
Spectroscopy of EX Hydrae
Breysacher, J., Vogt, N. **87**, 349
EX Hydrae: a coordinated campaign of photoelectric photometry from four observatories
Sterken, C., Vogt, N., Freeth, R., Kennedy, H.D., Marino, B.F., Page, A.A., Walker, W.S.G. **118**, 325

Feige 66

The OB Subdwarf Feige 66, a Chemical-composition Twin to HD 149382
Baschek, B., Höflich, P., Scholz, M. **112**, 76

Feige 86

The Ultraviolet Spectrum of the Hot Halo Star Feige 86
Hack, M. **74**, L4
The Ultraviolet High-resolution Spectrum of Feige 86
Hack, M. **81**, L1

FG Sge

Radial Velocity Curve, and Radius of the Pulsating Star FG Sge
Mayor, M., Acker, A. **92**, 1
The Spectrum of FG Sge in 1979-1980. I. $\lambda\lambda$ 3700-5000 Å
Acker, A., Jaschek, M., Gleizes, F. **110**, 181; **48**, 363
The spectrum of FG Sge in 1979-1982. II. $\lambda\lambda$ 6250-6800 Å
Acker, A. **128**, 261; **54**, 293

FK Com

UBVRI Photometry of FK Comae
Rucinski, S.M. **104**, 260

FZ CMa

Photometric Elements of the Eclipsing Binary FZ CMa
Giuricin, G., Mardirossian, F. **94**, 201

G 141-29

Discovery of Flare Activity on G 141-29
Pettersen, B.R. **97**, 199

G 165-7

A Spectrum Analysis for the Unusual Metallic Line White Dwarf G 165-7
Wehrse, R., Liebert, J. **86**, 139

G 51-15

Discovery of Flare Activity on the Very Low Luminosity Red Dwarf G 51-15
Pettersen, B.R. **95**, 135

G 628-40

Spectroscopic and Photometric Observations of White Dwarfs
Koester, D., Weidemann, V. **108**, 406

GD 358

The temperature of the pulsating DB white dwarf GD 358

Koester, D., Weidemann, V., Vauclair, G. **123**, L11

GD 66

Identification of gravity modes in the newly discovered ZZ Ceti variable GD 66

Dolez, N., Vauclair, G., Chevreton, M. **121**, L23

GK Per

The Old-nova GK Per (1901). I. Determination of the Orbital Period

Bianchini, A., Hamzaoglu, E., Sabbadin, F. **99**, 392

The Old-nova GK Per. II. Optical Outbursts

Bianchini, A., Sabbadin, F., Hamzaoglu, E. **106**, 176

The old-nova GK Per (1901). III. Accretion disc models

Bianchini, A., Sabbadin, F. **125**, 112

GL 2591

Angular Diameter of IRC + 10216, Mira, R Cas, and GL 2591 in the near Infrared

Foy, R., Chelli, A., Sibille, F., Léna, P. **79**, L5

Gliese 487

Observations of Flare Star Candidates and Discovery of Flare Activity on the dM4e Star Gliese 487

Asteriadis, G. **113**, 165

GP And

Photoelectric Photometry of the RRs-Variable GP And

Giesekeing, F., Hoffmann, M., Nelles, B. **75**, 261; **36**, 457

GT Cep

Revised Photometric Data for Six Eclipsing Binaries

Giuricin, G., Mardirossian, F., Mezzetti, M. **111**, 210; **49**, 89

GW Gem

Photometry and Elements of GW Geminorum

Broglia, P., Conconi, P. **104**, 170; **46**, 185

GX 3+1

X-ray observations of bright galactic bulge sources in the vicinity of GX 5-1

van der Klis, M., Rappaport, S. **121**, 119

GX 339-4

Discovery of Fast Optical Activity in the X-ray Source GX 339-4

Motch, C., Ilovaisky, S.A., Chevalier, C. **109**, L1

Simultaneous X-ray/optical observations of GX 339-4 during the May 1981 optically bright state

Motch, C., Ricketts, M.J., Page, C.G., Ilovaisky, S.A., Chevalier, C. **119**, 171

GX 5-1

X-ray observations of bright galactic bulge sources in the vicinity of GX 5-1

van der Klis, M., Rappaport, S. **121**, 119

GX 9+1

X-ray observations of bright galactic bulge sources in the vicinity of GX 5-1

van der Klis, M., Rappaport, S. **121**, 119

GX 339-4

GX 339-4: X-ray spectra of high and low states

Ricketts, M.J. **118**, L3

G 33-49

Discovery of Strong Ultraviolet Absorption in the Spectrum of the DC White Dwarf G 33-49

Vauclair, G., Weidemann, V., Koester, D. **100**, 113

HD 2453

Spectrophotometry of Peculiar B and A Stars, X, HD 2453, HD 8441, HD 18078, HD 50169, HD 110066 and Gamma Equulei

Adelman, S.J. **99**, 403; **44**, 265

HD 3980

Photometric and Magnetic, Variability of the Late Ap Star HD 3980

Maitzen, H.M., Weiss, W.W., Wood, H.J. **81**, 323

HD 5797, HD 12288, 9 Tau

Spectrophotometry of Peculiar B and A Stars. IX. HD 5797, HD 12288, 9 Tauri, HD 81009, HD 111133, 33 Librae, and HD 216533

Adelman, S.J. **95**, 393; **43**, 183

HD 5980

New Photoelectric Observations of the Wolf-Rayet Star HD 5980 in the Small Magellanic Cloud

Breysacher, J., Perrier, C. **90**, 207

HD 8441

Spectrophotometry of Peculiar B and A Stars, X, HD 2453, HD 8441, HD 18078, HD 50169, HD 110066 and Gamma Equulei

Adelman, S.J. **99**, 403; **44**, 265

HD 9250

HD 9250 and HD 14662 (HR 690), Two New Bright Cepheids with Very Small Amplitude

Burki, G., Mayor, M., Waelkens, C. **91**, 276

HD 10088

The group of low-harmonic pulsating CP2 stars: HD 10088, a new candidate

Weiss, W.W. **128**, 152

HD 22403

A Spectroscopic Binary with Ca II Emission Lines

Carquillat, J.-M., Nadal, R., Ginestet, N., Pedoussaut, A. **74**, 113

HD 101065

β Photometry of Przybylski's Star, A Comparison of Period Determination Methods

Weiss, W.W., Kreidl, T.J. **81**, 59

HD 101947

The Yellow Supergiant HD 101947 - A Cepheid with 125 Days Period?

Eichendorf, W., Reipurth, B. **77**, 227

HD 102567

IUE Observations of the Be Stars HD 102567 (4U1145-61), X Per and γ Cas

Hammerschlag-Hensberge, G., van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., de Loore, C., Glencross, W., Howarth, I., Willis, A.J., Wilson, R., Menzies, J. **85**, 119

I.U.E. Observations of HD 102567, the Proposed Optical Counterpart of 4U 1145-61

Bianchi, L., Bernacca, P.L. **89**, 214

HD 102567

Ultraviolet Observations of the Be Star and X-ray Binary 4U 1145-61 (= HD 102567 = Hen 715) obtained with the IUE

de Loore, C., Burger, M., Hensberge, H., Van Dessel, E.L. **104**, 150

HD 110066

Spectrophotometry of Peculiar B and A Stars, X, HD 2453, HD 8441, HD 18078, HD 50169, HD 110066 and Gamma Equulei

Adelman, S.J. **99**, 403; **44**, 265

HD 111133

Variability of the λ 5200-flux Depression of the Ap Star HD 111133

Buchholz, M., Maitzen, H.M. **73**, 222

HD 111980

Spectroscopic Orbits for Two Very High Velocity Halo Stars: HD 111980 and HD 149414

Mayor, M., Turon, C. **110**, 241

HD 113001

HD 113001: Photometric Separation

Goy, G. **88**, 370

HD 116072

Light curves of four southern bright hitherto unknown eclipsing binaries

Waelkens, C., Rufener, F. **121**, 162; **52**, 13

HD 116890

Periodicity of the Silicon Star HD 116890

Stift, M.J. **76**, 252

HD 122563

Differential Analysis of the Extreme Metal-deficient Stars HD 84903 and HD 184711 Relative to the Halo Star HD 122563

Spite, M., Spite, F. **76**, 150

The Ultraviolet Flux of HD 122563

Gustafsson, B., Bell, R.A., Fredga, K., Gahr, G.F. **89**, 255

HD 127493

Non-LTE Analysis of Subluminous O-Stars. II. The Hydrogen-deficient Subdwarf O-Star HD 127493

Simon, K.P. **107**, 313

HD 128220

Non-LTE analysis of subluminous O-stars. V. The binary system HD 128220

Gruschinske, J., Hamann, W.-R., Kudritzki, R.-P., Simon, K.P., Kaufmann, J.P. **121**, 85

HD 129929

HD 129929: a multiperiodic pulsating early-type star at intermediate galactic latitude

Waelkens, C., Rufener, F. **119**, 279

HD 134518

HD 134518: A Main Sequence Detached Eclipsing Binary

Giuricin, G., Mardirossian, F., Mezzetti, M. **109**, 366

HD 137949

VBLUV photometry of the magnetic Ap stars HD 137949 (33 Lib), HD 201601 (γ Equ), HD 203006 (θ Mic) and the peculiar shell star HD 190073

Deul, E.R., van Genderen, A.M. **118**, 289

HD 138403

Spectral Variations and Evidence for Edge and/or Line Locking Mechanism(s) in the Low-Excitation Planetary Nebula HD 138403

Surdej, A., Surdej, J., Swings, J.P. **105**, 242

The Far-UV Spectrum of the Low-excitation Planetary Nebula HD 138403

Surdej, J., Heck, A. **116**, 80

HD 14662

HD 9250 and HD 14662 (HR 690), Two New Bright Cepheids with Very Small Amplitude

Burki, G., Mayor, M., Waelkens, C. **91**, 276

HD 140283

The Al/Mg abundance ratio in halo stars

Arpigny, C., Magain, P. **127**, L7

HD 143414

The runaway Wolf-Rayet star HD 143414: evidence for a low-mass companion

Isserstedt, J., Moffat, A.F.J., Niemela, V.S. **126**, 183

HD 14662

The Very Small Amplitude Cepheids HD 9250 and HD 14662

Burki, G., Benz, W. **115**, 30

HD 149382

Spectral Analysis of the OB Subdwarf HD 149382

Baschek, B., Kudritzki, R.P., Scholz, M., Simon, K.P. **108**, 387

HD 149414

Spectroscopic Orbits for Two Very High Velocity Halo Stars: HD 111980 and HD 149414

Mayor, M., Turon, C. **110**, 241

HD 151910

Radial Velocity Studies of Spectroscopic Binaries with the Objective Prism II: Three New Massive Binaries in the Scorpius OB I Association

Gieseke, F. **112**, 395; **49**, 673

HD 151932

The Intrinsically Bright Wolf-Rayet Stars of Type WN 7. III. The Probable Single Sco OB I Star HD 151932 with Variable He I Envelope

Seggewiss, W., Moffat, A.F.J. **72**, 332

HD 152107

Spectral Variations of Two Cool Ap Stars: HD 25354 and HD 152107

Floquet, M. **112**, 299

HD 152333

Radial Velocity Studies of Spectroscopic Binaries with the Objective Prism II: Three New Massive Binaries in the Scorpius OB I Association

Giesekeing, F. **112**, 395; **49**, 673

HD 152590

Radial Velocity Studies of Spectroscopic Binaries with the Objective Prism II: Three New Massive Binaries in the Scorpius OB I Association

Giesekeing, F. **112**, 395; **49**, 673

HD 152667

UBV-polarimetry of the X-ray Binaries HD 77581 (4U 0900-40), HD 153919 (4U 1700-37) and of HD 152667

Östreicher, R., Schulte-Ladbeck, R. **114**, 328

HD 153919

Polarimetric Observations of the Massive X-ray Binaries HD 77581 (4U 0900-40) and HD 153919 (4U 1700-37)

Paradijs, J. van **87**, 210

HD 153919

New VBLUW Photometry of the X-ray Binary HD 153919 (4U 1700-37): The Optical Micro Variability of the O 6.5 f Supergiant

van Genderen, A.M., Windhorst, R.A. **97**, 79

New VBLUW Observations of the X-ray Binary HD 153919 (4U 1700-37)

van Genderen, A.M., Windhorst, R.A., Van Driel, W., Bakker, R., Wesselink, T.J.H., Hammerschlag-Hensberge, G. **99**, 204; **44**, 83

On the Short-term Variability of HD 153919 (=4U1700-37=V884 Sco)

van Paradijs, J., van der Woerd, H. **113**, 27

UBV-polarimetry of the X-ray Binaries HD 77581 (4U 0900-40), HD 153919 (4U 1700-37) and of HD 152667

Östreicher, R., Schulte-Ladbeck, R. **114**, 328

HD 160641

Mass Loss from Extreme Helium Stars. Detailed UV-line Fits for HD 160641, BD -9°4395 and BD +10°2179

Hamann, W.-R., Schönberner, D., Heber, U. **116**, 273

HD 161796

Study of the Variable F-type Supergiants HD 161796 and HD 163506 in Radial Velocity and Photometry

Burki, G., Mayor, M., Rufener, F. **92**, 325; **42**, 383

HD 161756

Light curves of four southern bright hitherto unknown eclipsing binaries

Waelkens, C., Rufener, F. **121**, 162; **52**, 13

HD 16219

The Spectrographic Binary HD 16219

Hube, D.P. **99**, 203; **44**, 59

HD 163506

Study of the Variable F-type Supergiants HD 161796 and HD 163506 in Radial Velocity and Photometry

Burki, G., Mayor, M., Rufener, F. **92**, 325; **42**, 383

HD 164270

The Variable, Single-line WC 9 Wolf-Rayet Star HD 164270 with a Low-mass Companion

Isserstedt, J., Moffat, A.F.J. **96**, 133

HD 165474

Spectrophotometry of Peculiar B and A Stars. XI. HD 89069, HD 165474, 10 Aquilae, HD 191742, HD 192678, and HD 204411

Adelman, S.J. **99**, 404; **44**, 309

HD 168476

A Fine Analysis of the Extreme Helium-rich Star HD 168476

Walker, H.J., Schönberner, D. **97**, 291

Absorption Line Wavelengths and Equivalent Widths for the Extreme Helium-rich Star HD 168476

Lynas-Gray, A.E., Walker, H.J. **100**, 332; **44**, 349

HD 175742

Orbits of Spectroscopic Binaries Determined with the Corav I Photoelectric Radial Velocity Spectrometer. I - HD 175 742

Imbert, M. **80**, 331; **38**, 491

HD 175754

Far-UV Wind Line Profile Changes in the O-type Star HD 175754

Carrasco, L., Costero, R., Stalio, R. **100**, 183

HD 18078

Spectrophotometry of Peculiar B and A Stars, X, HD 2453, HD 8441, HD 18078, HD 50169, HD 110066 and Gamma Equulei

Adelman, S.J. **99**, 403; **44**, 265

HD 184035

Light curves of four southern bright hitherto unknown eclipsing binaries

Waelkens, C., Rufener, F. **121**, 162; **52**, 13

HD 184711

Differential Analysis of the Extreme Metal-deficient Stars HD 84903 and HD 184711 Relative to the Halo Star HD 122563

Spite, M., Spite, F. **76**, 150

HD 185257

Light curves of four southern bright hitherto unknown eclipsing binaries

Waelkens, C., Rufener, F. **121**, 162; **52**, 13

HD 187473

The Identification of Rare Earths in the Silicon Star HD 187473

Hensberge, H., Cowley, C.R., van Rensbergen, W., Aikman, G.C.L. **87**, 369

HD 190073

VBLUW photometry of the magnetic Ap stars HD 137949 (33 Lib), HD 201601 (γ Equ), HD 203006 (θ Mic) and the peculiar shell star HD 190073

Deul, E.R., van Genderen, A.M. **118**, 289

HD 191742

Spectrophotometry of Peculiar B and A Stars. XI. HD 89069, HD 165474, 10 Aquilae, HD 191742, HD 192678, and HD 204411
Adelman, S.J. **99**, 404; **44**, 309

HD 192678

Spectrophotometry of Peculiar B and A Stars. XI. HD 89069, HD 165474, 10 Aquilae, HD 191742, HD 192678, and HD 204411
Adelman, S.J. **99**, 404; **44**, 309

HD 19445

The Al/Mg abundance ratio in halo stars
Arpigny, C., Magain, P. **127**, L7

HD 195987

Orbites spectroscopiques d'étoiles doubles déterminées avec le spectromètre photoélectrique à vitesses radiales *Coravel II*-HD 195987
Imbert, M. **92**, 324; **42**, 331

HD 197406

The Intrinsically Bright Wolf-Rayet Stars of Type WN7. V. The Single-line Runaway Binary HD 197406
Moffat, A.F.J., Seggewiss, W. **86**, 87

HD 199178

Polarimetric Observations of HD 199178 - an FK Comae Type Star
Pirola, V., Vilhu, O. **110**, 351

HD 200775

Ultraviolet, Optical and Infrared Observations of the Herbig Be Star HD 200775
Altamore, A., Baratta, G.B., Cassatella, A., Grasdalen, G.L., Persi, P., Viotti, R. **90**, 290

HD 200775

On the Spectrum of the Herbig Be Star HD 200775
Baschek, B., Beltrametti, M., Köppen, J., Traving, G. **105**, 300
 On the Balmer Emission Lines of the Herbig Be Star HD 200775
Köppen, J., Finkenzeller, U., Mundt, R., Beltrametti, M. **112**, 174

HD 200925

Radial Velocities of a New Short Period Variable Star: HD 200925
Imbert, M. **86**, 259

HD 201601

VBLUW photometry of the magnetic Ap stars HD 137949 (33 Lib), HD 201601 (γ Equ), HD 203006 (θ Mic) and the peculiar shell star HD 190073
Deul, E.R., van Genderen, A.M. **118**, 289

HD 203006

VBLUW photometry of the magnetic Ap stars HD 137949 (33 Lib), HD 201601 (γ Equ), HD 203006 (θ Mic) and the peculiar shell star HD 190073
Deul, E.R., van Genderen, A.M. **118**, 289

HD 20630

The Sun Among the Stars. VI. The Solar Analog HD 44594
Hardorp, J., Tüg, H., Schmidt-Kaler, T. **107**, 311

HD 210763

Contribution to the study of F to M binaries. I. Orbital elements of the double lined spectroscopic binaries HD 47415 and HD 210763

Nadal, R., Carquillat, J.M., Pédoussaut, A., Ginestet, N. **121**, 331; **52**, 293

HD 215441

A Non-axisymmetric Eccentric Dipole Model for the Magnetic Variations of HD 215441
Stift, M.J. **82**, 142

HD 216533

Spectral Variations of the Ap Star HD 216533. I. Observational Results (Erratum)

Floquet, M. **73**, 367; **36**, 167

Spectral Variations of the Ap Star HD 216533. II. The Oblique Rotator Model

Floquet, M. **77**, 263

Spectrophotometry of Peculiar B and A Stars. IX. HD 5797, HD 12288, 9 Tauri, HD 81009, HD 111133, 33 Librae, and HD 216533
Adelman, S.J. **95**, 393; **43**, 183

HD 224801

Short Period Light Variations of the Ap-Star HD 224801
Nittmann, J., Rakosch, K.D. **97**, 325

HD 26676

The UV Spectrum of the Possible Radio Star HD 26676
Stickland, D.J. **77**, 359

HD 30849

Probable Periodicities of the Ap Stars ξ Phe and HD 30849
Renson, P. **77**, 366

HD 33579

Long Time Baseline *VBLUW* Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757, and HDE 269006 (I)
van Genderen, A.M. **78**, 249; **38**, 151

Long Time Baseline *VBLUW* Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757 and HDE 269006 (II)
van Genderen, A.M. **80**, 330; **38**, 381

HD 36705

HD 36705: A New Bright X-ray Emitting RS CVn Star
Pakull, M.W. **104**, 33
 Photometry of the post T Tauri star HD 36705
Rucinski, S.M. **121**, 330; **52**, 281

HD 37819

HD 37819, a New δ Scuti Star: Determination of the Oscillation Mode
Burki, G., Mayor, M. **97**, 4

HD 38268

R 136: WN or O Spectral Characteristics?
Vreux, J.M., Dennefeld, M., Andriolat, Y. **113**, L10

HD 45677

Correlations Between Line-profile and Photometric Variations in the B2 IV [e] Star HD 45677

Swings, J.P., Barbier, R., Klutz, M., Surdej, A., Surdej, J. **90**, 116

HD 47415

Contribution to the study of F to M binaries. I. Orbital elements of the double lined spectroscopic binaries HD 47415 and HD 210763

Nadal, R., Carquillat, J.M., Pédoussaut, A., Ginestet, N. **121**, 331; **52**, 293

HD 50169

Spectrophotometry of Peculiar B and A Stars. X, HD 2453, HD 8441, HD 18078, HD 50169, HD 110066 and Gamma Equulei

Adelman, S.J. **99**, 403; **44**, 265

HD 51418

Spectrophotometry of peculiar B and A stars. XIII. HD 51418, 53 Camelopardalis, 78 Virginis, and Kappa Piscium

Pyper, D.M., Adelman, S.J. **119**, 324; **51**, 365

HD 51480

The Shell Star HD 51480

Welin, G. **79**, 334

HD 52942

The early B-type eclipsing binary FZ CMa (HD 52942): a massive triple system

Moffat, A.F.J., Vogt, N., Vaz, L.P.R., Gronbech, B. **120**, 278

HD 62001

The Disappearance of V-V 1-7 and the Nature of Its Central Star

Méndez, R.H., Lee, P., O'Brien, A., Liller, W. **91**, 331

HD 63032

Detection of a late B star companion of the bright cluster giant c Pup = HD 63032

Groote, D., Reimers, D. **119**, 319

HD 65699

Spectrum analysis of the barium stars HD 83548 and HD 65699

Kovács, N. **124**, 63

HD 69148

Contribution to the study of F, G, K, M binaries. II. Orbital elements of the single-lined spectroscopic binaries HD 69148 and HD 85091

Carquillat, J.M., Nadal, R., Ginestet, N., Pédoussaut, A. **127**, 425; **54**, 187

HD 74195

On the variability of the two brightest stars in the galactic cluster IC 2391

Waelkens, C., Rufener, F. **121**, 162; **52**, 21

HD 74560

On the variability of the two brightest stars in the galactic cluster IC 2391

Waelkens, C., Rufener, F. **121**, 162; **52**, 21

HD 77581

Polarimetric Observations of the Massive X-ray Binaries HD 77581 (4U 0900-40) and HD 153919 (4U 1700-37)

Paradijs, J. van **87**, 210

Variable Linear Polarization in the X-ray Binary HD 77581

Korhonen, T., Pirola, V. **91**, 372

HD 77581

A Discussion on *VBLUW* Photometry of the X-ray Binary HD 77581 (= Vela X-1 = 3U 0900-40) and on the Overluminosity of the Primaries in X-ray Binaries. The Optical Micro Variability of the Hot Supergiant Primaries HD 77581 and HD 153919

van Genderen, A.M. **96**, 82

UBV-polarimetry of the X-ray Binaries HD 77581 (4U 0900-40), HD 153919 (4U 1700-37) and of HD 152667

Östreicher, R., Schulte-Ladbeck, R. **114**, 328

HD 80077

Mass Loss, Linear Polarization Variability, and Duplicity of the Luminous B2 Supergiant HD 80077

Knoechel, G., Moffat, A.F.J. **110**, 263

HD 80383

Photometry of the Beta Cephei Star HD 80383

Haug, U. **80**, 119

HD 81009, HD 111133

Spectrophotometry of Peculiar B and A Stars. IX. HD 5797, HD 12288, 9 Tauri, HD 81009, HD 111133, 33 Librae, and HD 216533

Adelman, S.J. **95**, 393; **43**, 183

HD 83548

Spectrum analysis of the barium stars HD 83548 and HD 65699

Kovács, N. **124**, 63

HD 84903

Differential Analysis of the Extreme Metal-deficient Stars HD 84903 and HD 184711 Relative to the Halo Star HD 122563

Spite, M., Spite, F. **76**, 150

HD 85091

Contribution to the study of F, G, K, M binaries. II. Orbital elements of the single-lined spectroscopic binaries HD 69148 and HD 85091

Carquillat, J.M., Nadal, R., Ginestet, N., Pédoussaut, A. **127**, 425; **54**, 187

HD 86161

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Moffat, A.F.J., Niemela, V.S. **108**, 326

HD 87643

The Reflection Nebula Surrounding HD 87643

Surdej, A., Surdej, J., Swings, J.P., Wamsteker, W. **93**, 285

HD 87643

Analysis of the IUE and Optical Spectra of the Peculiar Be Star HD 87643

de Freitas Pacheco, J.A., Gilra, D.P., Pottasch, S.R. **108**, 111

More on the reflection nebula surrounding HD 87643 and the non-uniform atmosphere of the central star

Surdej, J., Swings, J.P. **117**, 359

HD 89069

Spectrophotometry of Peculiar B and A Stars. XI. HD 89069, HD 165474, 10 Aquilae, HD 191742, HD 192678, and HD 204411

Adelman, S.J. **99**, 404; **44**, 309

HD 92664

The Photometric Variability of the Ap Star HD 92664
Vanbeveren, D., Hensberge, H. **72**, 378; **35**, 301

HD 93250

Non-LTE Analysis of the O 3-star HD 93250

Kudritzki, R.-P. **85**, 174

Studies of the Carina Nebula. III. The Spectral Energy Distribution of the Very Hot and Massive Star HD 93250

Thé, P.S., Tjin A Dje, H.R.E., Kudritzki, R.P., Wesselius, P.R. **91**, 360

HD 93521

Ultraviolet Observations of the Blue Halo Star: HD 93521

Ramella, M., Morossi, C., Santin, P. **90**, 146

HD 96548

The Variable, Single-line Wolf-Rayet Star HD 96548 with a Low-mass Companion

Moffat, A.F.J., Isserstedt, J. **91**, 147

HDE 245770

Optical Spectra of HDE 245770 = A 0535 + 26

Giangrande, A., Giovannelli, F., Bartolini, C., Guarnieri, A., Piccioni, A. **86**, 267; **40**, 289

HDE 268757

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HDE 269006

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Further *VBLUW* Photometry of the S Doradus Type Variables S Dor and HDE 269006 in the LMC and a Discussion on Their Temperatures

van Genderen, A.M. **112**, 61

He

The Infrared-excess of Peculiar B and A Stars I

Groote, D., Kaufmann, J.P. **94**, L23

He 3-640

A Photometric and Spectroscopic Study of He 3-640 (? = A 1118-61)

Janot-Pacheco, E., Ilovaisky, S.A., Chevalier, C. **99**, 274

Her X 1

Cyclotron Line Formation by Resonant Compton-cyclotron Scattering in Hercules-X1

Bonazzola, S., Heyvaerts, J., Puget, J.L. **78**, 53

Her X-1

Spectra and Pulse Formation Mechanism in X-ray Pulsars: Application to Her X-1

Yahel, R.Z. **90**, 26

Quantum Theory of Cyclotron Emission and the X-ray Line in Her X-1

Melrose, D.B., Zheleznyakov, V.V. **95**, 86

On the Transfer Equation for the Cyclotron Line in Her X-1

Melrose, D.B. **101**, 284

Observation of Hard X-rays Line Emission from Her X-1

Polcaro, V.F., Bazzano, A., La Padula, C., Ubertini, P., Violetto, G., Manchanda, R.K., Damle, S.V. **108**, 249

Hercules X-1: a random walk noise model for the 35-day turn-ons

Staubert, R., Bezler, M., Kendziorra, E. **117**, 215

H-H 2H

The Iron Abundance in Herbig-Haro Objects and Some New Data on H-H 2H

Böhm, K.H., Brugel, E.W. **74**, 297

HL CMa

Spectroscopic observations of the cataclysmic variable HL CMa during outburst

Wargau, W., Bruch, A., Drechsel, H., Rahe, J. **125**, L1

HM Sge

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Ciatti, F., Mammano, A., Vittone, A. **79**, 247

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Blair, W.P., Stencel, R.E., Shaviv, G., Feibelman, W.A. **99**,

V 1016 Cygni and HM Sagittae: binary stellar systems

Taranova, O.G., Yudin, B.F. **117**, 209

HM Sge and V 1016 Cyg: spectroscopic changes in 1981-1982

Ciatti, F., Vittone, A. **122**, 343

HR 1099

Infrared photometry of the RS CVn binaries. II. *JHK*L light curves of HR 1099

Antonopoulou, E. **123**, 358; **52**, 381

HR 234

Periodic Spectral Variability of the Ap Star HR 234

Panek, R.J. **90**, 341

HR 2724

HR 2724 - A New Bright Variable in the δ Scuti Instability Strip

Baade, D., Stahl, O. **114**, 131

HR 3562

Multi-periodicity of the new variable B-type star HR 3562

Burki, G. **121**, 211

HR 4453

HR 4453: An Anomalous Bright UV Source?

Polidan, R.S., Oegerle, W.R., Margon, B. **92**, 212

HR 4975

HR 4975: A Possible Early-Type Contact System with Unequal Components

Waelkens, C., Bartholdi, P. **108**, 51

HR 5005

Period determination of the Delta Scuti star HR 5005
Peña, J.H., Peniche, R., González, S.F. **124**, 153; **53**, 81

HR 5049

Cobalt in the Southern Magnetic Ap Star HR 5049
Dworetzky, M.M., Trueman, M.R.G., Stickland, D.J. **85**, 138

HR 5999

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Andersen, J., Gahm, G.F., Krelowski, J. **113**, 176

HR 6127

The Sr-Y-Zr Abundance Peak in HR 6127
Pirronello, V., Strazzulla, G. **104**, 80

HR 6522

HR 6522: a previously unknown multiperiodic delta Scuti star
Waelkens, C., Bartholdi, P. **121**, 162; **52**, 1

HR 6626

A Spectroscopic Orbit for HR 6626
Mayor, M., Griffin, R.F. **91**, 112

HR 7129

The Oblique-rotator of HR 7129
Hensler, G. **74**, 284

HR 7308

HR 7308, a New Cepheid with Variable Amplitude and Very-short Period (1.5 d)

Burki, G., Mayor, M. **91**, 115

VBLUW Photometry of the Very Small Amplitude and Very Short Period Cepheid HR 7308 = HD 180583

van Genderen, A.M. **99**, 386

The Peculiar Classical Cepheid HR 7308

Burki, G., Mayor, M., Benz, W. **109**, 258

HR 8752

A High Resolution IUE Spectrum of the GO-G5 Ia Supergiant HR 8752
Stickland, D.J., Lambert, D.L. **102**, 296

HR 8861

The Light Variations of the Ap Star HR 8861
Blanco, C., Catalano, F.A., Strazzulla, G. **81**, 389; **39**, 127

HR 9049

An Instructive Case of Period Determination: The Eclipsing Spectroscopic Binary Star HR 9049 (HD 224113)

Burki, G., Rufener, F. **81**, 389; **39**, 121

HR 96

Spectroscopic orbit of the star HR 96
Hube, D.P. **124**, 151; **53**, 29

HS Hya

Revised Photometric Elements of the Detached Eclipsing Binaries RS Cha, RZ Cha, and HS Hya

Giuricin, G., Mardirossian, F., Mezzetti, M., Predolin, F. **85**, 259

HT Cas

Spectroscopic Observations of Dwarf Novae. I. HT Cas
Rafanelli, P. **76**, 365

HU Tau

Photometric Elements of the Eclipsing Binary HU Tau
Giuricin, G., Mardirossian, F. **97**, 410

HV 1369

HV 1369, a Cepheid at a Possible Depth of 32 Kpc in the Small Magellanic Cloud
van Genderen, A.M. **101**, 289

HZ Her

HZ Herculis and the Match Paradox
Kippenhahn, R., Thomas, H.C. **75**, 281

Photometry of HZ Herculis in 1978

Mazeh, T. **82**, 260

On the Influence of Radiation Pressure on the Light Curve of HZ Herculis

Krebs, J. **88**, 363

UBV Photometry of HZ Herculis: the Shape of the Primary Minimum

Kippenhahn, R., Schmidt, H.U., Thomas, H.-C. **90**, 54

Photometric observations. Is HZ Herculis getting darker?

Thomas, H.-C., Africano, J., Delgado, A.J., Schmidt, H.U. **126**, 45

HZ Herculis, still active

Delgado, A.J., Schmidt, H.U., Thomas, H.-C. **127**, L15

HZ 43

The Hot White Dwarf HZ 43 II. The Helium Abundance Derived from Its Ultra Soft X-ray Spectrum

Heise, J., Huizenga, H. **84**, 280

IC 433

Supernova Remnant IC 443: Fast Filaments and High-velocity Gas

Lozinskaya, T.A. **71**, 29

IID 25354

Spectral Variations of Two Cool Ap Stars: HD 25354 and HD 152107

Floquet, M. **112**, 299

IRC + 10216

High Sensitivity Molecular Line Observations of IRC + 10216

Olofsson, H., Johansson, L.E.B., Hjalmarson, Å., Nguyen-Quang-Rieu **107**, 128

IRC+10216

Angular Diameter of IRC+10216, Mira, R Cas, and GL 2591 in the near Infrared

Foy, R., Chelli, A., Sibille, F., Léna, P. **79**, L5

IRC+10216 (CW Leo)

Molecular Abundances in IRC+10216

Lafont, S., Lucas, R., Omont, A. **106**, 201

IU AurRevised Photometric Elements of the Eclipsing Binaries IU Aur and δ Lib

Giuricin, G., Mardirossian, F., Mezzetti, M., Cester, B. **76**, 369; 37, 513

Two-colour Photometry of the Eclipsing Binary IU Aur

Pettersen, B.R. **80**, 265

KQ Sco

Possible Association Membership for the Three Long Period Cepheids RZ Velorum, SW Velorum, and KQ Scorp

Turner, D.G. **76**, 350

KQ Puppis

The Ultraviolet Spectrum of KQ Puppis (Boss 1985)

Altamore, A., Giangrande, A., Viotti, R. **112**, 179; **49**, 511

KS Per

The Hot Component of KS Persei (HD 30353)

Drilling, J.S., Schönberner, D. **113**, L22

Kuwanow's Novalike Object

Infrared Observations of Kuwanow's Novalike Object

Bensammar, S., Friedjung, M., Assus, P. **83**, 261

I Car

Fourier Analysis of the Light Variation of I Carinae

Cogan, B.C., Faulkner, D.J., Butler, S.J. **86**, 283

L 745-46 A

Discovery of Ca II Absorption at 1840 Å in the IUE Spectra of Two Helium-rich White Dwarfs

Koester, D., Vauclair, G., Weidemann, V., Zeidler-K.T., E.M. **113**, L13

L 791-40 A

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Lep

Evidence for outburst in the shell star 17 Lep derived from ultraviolet spectra

Molaro, P., Morossi, C., Ramella, M. **119**, 160

LkH₃ 324On the nature of the (intermittent?) emission line star LkH₃324

Chavarria-K., C., Finkenzeller, U., Appenzeller, I., de Lara, E., Cardona, O. **118**, 189

LMC X-3

UBV photometry of the optical candidate for LMC X-3

van der Klis, M., Tjemkes, S., van Paradijs, J. **126**, 265

LMC X-4

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LSI+61°303

Search for light variability of LSI+61°303

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LSS 1916

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Drilling, J.S. **71**, 214

LSS 3371

The Spectra and Colors of Two New VV Cephei Stars

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LT Her

Photometric Elements of the Eclipsing Binary LT Her

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Lightcurve synthesis of the semi-detached binaries LT Her, WX Eri, AW Cam

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L97-3IUE Observation of UV Carbon I Absorption Lines in the Spectrum of the C₂ White Dwarf L97-3

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Mira

Angular Diameter of IRC+10216, Mira, R Cas, and GL 2591 in the near Infrared

Foy, R., Chelli, A., Sibille, F., Léna, P. **79**, L5

The shock-induced variability of the H α emission profile in Mira

Gillet, D., Maurice, E., Baade, D. **128**, 384

Mira Cet

The Diameter of Mira

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NML Cyg

An H II Region Near NML Cygnus

Habing, H.J., Goss, W.M., Winnberg, A. **108**, 412

NN Cep

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Malakpour, I. **78**, 7

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Kohoutek, L., Pauls, R. **92**, 200

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OX Cas

Photometric Elements of the Eclipsing Binary OX Cas

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OY Car

The Physical Parameters of the Dwarf Nova OY Car

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P Cyg

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Pec A

The Infrared-excess of Peculiar B and A Stars I

Groote, D., Kaufmann, J.P. **94**, L23

Peg

Rapid Line Variability. IV. Constancy of Two Reported Variables

Breger, M., Light, A., Scholtes, M. **78**, 11

Pleione

An Atlas of the Shell Spectrum of Pleione Between 3167 Å and 4924 Å

Ballereau, D. **89**, 251; **41**, 305

Pollux

Theoretical Stellar Chromospheres of Late Type Stars. III. Models for Procyon, Capella, Pollux, and 70 Ophiuchi A

Schmitz, F., Ulmschneider, P. **84**, 191

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Procyon

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PS 74

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PV Pup

Four-colour photometry of eclipsing binaries. XVIII. Lightcurves of PV Puppis

Reipurth, B., Clausen, J.V., Nordström, B. **128**, 261; **54**, 301

QV Nor

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QX Car

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QX Car

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R Aql

IUE Observations of Two Late Type Stars: R Aql and W Hya

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R Cas

Angular Diameter of IRC +10216, Mira, R Cas, and GL 2591 in the near Infrared

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R 127

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R 136

The ultraviolet spectrum of the supermassive object R 136 a. I. The mass loss rate

Feitzinger, J.V., Hanuschik, R.W., Schmidt-Kaler, T. **120**, 269

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R 66

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R 71

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R 81

R 81: P Cygni of the LMC

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Erratum: R 81: P Cygni of the LMC

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RCrB

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Ross 627

The hydrogen-rich, cool DA white dwarf Ross 627

Liebert, J., Wehrse, R. **122**, 297

RR Pic

A Photometric and Polarimetric Investigation of the Old Nova RR Pictoris

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RS Cha

Four-colour Photometry of Eclipsing Binaries. XIA. Photometric Elements, Absolute Dimensions, and Helium Abundance of RS Chamaeleontis

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Revised Photometric Elements of the Detached Eclipsing Binaries RS Cha, RZ Cha, and HS Hya

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RS CVn

Evidence of Variable Migration Rate and a Past Direction Reversal of the RS CVn Wave-like Distortion

Blanco, C., Catalano, S., Marilli, E., Rodonò, M. **106**, 311

Normalized photoelectric observations for a three-dimensional representation of the light changes of RS Canum Venaticorum

Lorenzi, L., Lattanzi, A., Siciliano, F. **118**, 209; **51**, 77

RT And

Photoelectric Observations of the Eclipsing Binary RT And

Mancuso, S., Milano, L., Russo, G. **75**, 261; **36**, 415

Three-colour Photoelectric Observations of RT And

Mancuso, S., Milano, L., Russo, G., Sollazzo, C. **78**, 250; **38**, 187

RT UMi

A Comparison of Eclipsing Binary Models. Application to RT UMi

Milano, L., Russo, G., Sollazzo, C. **96**, 328

Revised Photometric Elements of the Eclipsing Binary RT UMi

Mardirossian, F., Giuricin, G. **97**, 206

RU Cnc

Photoelectric Observations of Three RS CVn-type Eclipsing Binaries: VV Mon, CQ Aur, and RU Cnc

Scaltriti, F. **72**, 378; **35**, 291

1977-78 and 1978-79 Photoelectric Light Curves of the RS CVn-Type Binaries VV Mon, RU Cnc and CQ Aur

Cerruti-Sola, M., Scaltriti, F., Blanco, C., Catalano, S., Marilli, E., Rodonò, M., Strazzulla, G., Chambliss, C.R. **91**, 381; **42**, 245

Ru Eri

Revised Photometric Data for Six Eclipsing Binaries

Giuricin, G., Mardirossian, F., Mezzetti, M. **111**, 210; **49**, 89

RU Lup

The Far-UV Spectrum of the T Tauri Star RU Lupi

Gahm, G.F., Fredga, K., Liseau, R., Dravins, D. **73**, L4

RV Cro

Revised Photometric Data for Six Eclipsing Binaries

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RW Aur

YY Orionis Line Profiles in the Spectrum of RW Aurigae

Appenzeller, I., Wolf, B. **105**, 313

The short-term spectral variability of the T Tauri star RW Aur

Appenzeller, I., Östreicher, R., Schiffer, J.G., Egge, K.E., Petersen, B.R. **118**, 75

RX Her

A Photometric Study of the Eclipsing Binary RX Hercules

Jeffreys, K.W. **92**, 323; **42**, 285

RX Pup

More on the Spectrum of the Peculiar Emission-line Object RX Puppis

Klutzn, M. **73**, 244

Is RX Puppis Returning to a Symbiotic Phase?

Klutzn, M., Swings, J.P. **96**, 406

RY Sct

A Lightcurve Analysis for the Massive Binary RY Sct

Giuricin, G., Mardirossian, F. **101**, 138

RY Scuti - A Beta Lyrae System?

King, A.R., Jameson, R.F. **71**, 326

Photoelectric UBV Light Curves of the Eclipsing Binary RY Scuti

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Milano, L., Vittone, A., Ciatti, F., Mammano, A., Margoni, R., Strazzulla, G. **100**, 59

RY Sgr

Spectra of RY Sgr near Minimum Light

Spite, F., Spite, M. **80**, 61

RZ Cas

A Spectroscopic Orbit of RZ Cassiopeiae

Duerbeck, H.W., Hänel, A. **78**, 249; **38**, 155

RZ Cha

Revised Photometric Elements of the Detached Eclipsing Binaries RS Cha, RZ Cha, and HS Hya

Giuricin, G., Mardirossian, F., Mezzetti, M., Predolin, F. **85**, 259

RZ Oph

VBLUW Photometry of RZ Oph (BD +7° 3832): Eclipse of the Accretion Disk

van Paradijs, J., van der Woerd, H., van der Bij, M., Lee Van Suu, A. **111**, 372

RZ Sct

J, K, L, Infrared Observations of RZ Scutum

Akinci, R., Jameson, R.F. **88**, 320

RZ Vel

Possible Association Membership for the Three Long Period Cepheids RZ Velorum, SW Velorum, and KQ Scorprii

Turner, D.G. **76**, 350

S Ant

Determination of Parameters of W UMa Systems. II: TW Cet, S Ant, U Peg, Er Ori

Russo, G., Sollazzo, C., Maceroni, C., Milano, L. **106**, 378; **47**, 211

S CrA

Spectroscopic and Photometric Variations of the YY Orionis Star S CrA

Mundt, R. **74**, 21

The Satellite-UV Spectrum of S CrA

Appenzeller, I., Wolf, B. **75**, 164

Electron Scattering in the Infalling Envelope of the Protostar S CrA

Stahl, O., Wolf, B. **90**, 338

S CrA and CoD -35° 10525, Two Bright Young Stars

Bertout, C., Carrasco, L., Mundt, R., Wolf, B. **107**, 412; **47**, 419

S Dor

Long Time Baseline *VBLUW* Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757, and HDE 269006 (I)

van Genderen, A.M. **78**, 249; **38**, 151

Long Time Baseline *VBLUW* Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757 and HDE 269006 (II)

van Genderen, A.M. **80**, 330; **38**, 381

IUE and Ground Based Observations of the LMC Star S Doradus

Wolf, B., Appenzeller, I., Cassatella, A. **88**, 15

High Dispersion Spectroscopy of the LMC Star S Doradus During Maximum Light

Stahl, O., Wolf, B. **110**, 272

Further *VBLUW* Photometry of the S Doradus Type Variables S Dor and HDE 269006 in the LMC and a Discussion on Their Temperatures

van Genderen, A.M. **112**, 61

S 22

Conditions around the Large Magellanic Cloud Emission Line Star S 22

Friedjung, M., Muratorio, G. **85**, 233

The LMC emission line star S 22 (=HD 34664). III. Ultraviolet to infrared energy distribution

Bensammar, S., Friedjung, M., Muratorio, G., Viotti, R. **126**, 427

SB 21

SB 21, An Extremely Helium-rich Subdwarf O-star

Hunger, K., Kudritzki, R.P. **88**, L4

Sirius

High Resolution Profiles in A Type Stars. The Ca II K Line in Sirius

Griffin, R., Griffin, R. **71**, 36

High Resolution Profiles in A-type Stars. The Ca II K Lines in Sirius-Comments

Czarny, J., Felenbok, P. **71**, 38

High Resolution Profiles in A Type Stars. II. The Ca II K Line in Sirius

Griffin, R., Griffin, R. **82**, 385

The Binary System Sirius in the Context of Stellar Evolution

D'Antona, F. **114**, 289

Sirius B

On the Effective Temperature of Sirius B

Koester, D. **72**, 376

SMC Sk 143

Sk 143: An SMC Star with a Galactic-type Ultraviolet Interstellar Extinction

Lequeux, J., Maurice, E., Prévot-Burnichon, M.-L., Prévot, L., Rocca-Volmerange, B. **113**, L15

SMC X-1

A Discussion on New *VBLUW* Observations of the X-ray Binary Sk. 160=SMC X-1

van Genderen, A.M., van Groningen, E. **101**, 101

A Study of Ultraviolet Spectroscopic and Light Variations in the X-ray Binaries LMC X-4 and SMC X-1

van der Klis, M., Hammerschlag-Hensberge, G., Bonnet-Bidaud, J.M., Ilovaisky, S.A., Mouchet, M., Glencross, W.M., Willis, A.J., van Paradijs, J., Zuiderwijk, E.J., Chevalier, C. **106**, 339

SMC X-2

UBV Photometry of SMC X-2

Schlosser, W., Paradijs, J. van **75**, 112

SS Cyg

Outburst Photometry of the Dwarf Nova SS Cygni

Hopp, U., Witzigmann, S. **89**, 227

SS 433

On the Interpretation of the Large Variations in the Line Positions in SS 433

Milgrom, M. **76**, L3

Is There a Second Set of Shifted Lines in SS 433?

Amitai-Milchgrub, A., Shaham, J. **77**, L7

SS 433: The Acceleration and Collimation Mechanisms

Milgrom, M. **78**, L9

Thomson Scattered Lines in the Spectrum of SS 433. A Powerful Tool for Studying the System

Milgrom, M. **78**, L17

On the Discrepancy between the Optical and Radio Position of SS 433

de Vegt, Chr., Gehlich, U.K. **79**, L16

VLBI Detection of SS 433

Schilizzi, R.T., Norman, C.A., van Breugel, W., Hummel, E. **79**, L26

An Early-type Binary Model for SS 433

van den Heuvel, E.P.J., Ostriker, J.P., Petterson, J.A. **81**, L7

H I Absorption in the Direction of SS 433

van Gorkom, J.H., Goss, W.M., Shaver, P.A. **82**, L1

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Bedogni, R., Braccisi, A., Marano, B., Messina, A. **84**, L4

The Unique Spectrum of SS 433, a Star Inside a Supernova Remnant

Mammano, A., Ciatti, F., Vittone, A. **85**, 14

Deviations from the Standard Model of SS 433

Milgrom, M. **87**, L15

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Cohen, N.L., Drake, F.D. **89**, L6

A Kinematical Analysis of SS 433 after Two Observing Seasons, 1978-79

Ciatti, F., Mammano, A., Vittone, A. **94**, 251

Precession and System Parameters in Early-type Binary Models for SS 433

Hut, P., van den Heuvel, E.P.J. **94**, 327

Implications of Photometric and Spectroscopic Periods of SS 433

Katz, J.I. **95**, L15

A Joint Optical-radio Study of SS 433

Ciatti, F., Mammano, A., Bartolini, C., Guarnieri, A., Piccioni, A., Downes, A.J.B., Emerson, D.T., Salter, C.J. **95**, 177

Erratum: VLBI Detection of SS 433

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Very High Resolution Observations of SS 433 at 10.65 GHz

Geldzahler, B.J., Downes, A.J.B., Shaffer, D.B. **98**, 205

Erratum: A Joint Optical-radio Study of SS 433

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Further Radio Observations of W 50: Total Intensity and Linear Polarization Measurements at 1.7 and 2.7 GHz

Downes, A.J.B., Pauls, T., Salter, C.J. **103**, 277

The 6-day Photometric and Spectroscopic Periods in SS 433

Matese, J.J., Whitmire, D.P. **106**, L9

Short-period components in the relativistic radial velocities of SS 433 = V 1343 Aql

Mammano, A., Margoni, R., Ciatti, F., Cristiani, S. **119**, 153

Nutation-like effects in SS 433

Ciatti, F., Mammano, A., Iijima, T., Vittone, A. **123**, 360; **52**, 443

Correlations and periodicities of equivalent widths in SS 433

Vittone, A., Rusconi, L., Sedmak, G., Mammano, A., Ciatti, F. **124**, 154; **53**, 109

Short-timescale IR variation of SS 433

Kodaira, K., Lenzen, R. **126**, 440

SW Lac

Determination of parameters of W UMa systems. IV: BV Dra, BW Dra, EM Lac, SW Lac

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SW Vel

Possible Association Membership for the Three Long Period Cepheids RZ Velorum, SW Velorum, and KQ Scorpil

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SY Mus

A Brightening of the Symbiotic Variable SY Muscae

Michalitsianos, A.G., Kafatos, M., Feibelman, W.A., Wallerstein, G. **109**, 136

SZ Cam

SZ Cam: A Semi-detached Binary System?

Mardirossian, F., Mezzetti, M., Predolin, F., Giuricin, G. **86**, 264

SZ Lyn

Photometry of the Dwarf Cepheids SZ Lyn and EH Lib

Garrido, R., Alfaro, E.J., Quintana, J.M., Saez, M. **73**, 365; **36**, 51

T Tau

On the Discrepancy Between the Optical and Radio Position of T Tauri

de Vegt, C. **109**, L15

T Tauri South: a protostar?

Bertout, C. **126**, L1

Tr 27-102

A Discussion on Three Yellow Variable Supergiants in and Near the Cepheid Instability Strip: V 810 Cen (= HD 101947), Tr. 27-102 (= HD 159378) and BL Tel (F), Based on *VBLUW* Photometry and the Long-period Cepheids Absence in the Galaxy
van Genderen, A.M. **88**, 77

Tr 27-28

Tr 27-28: A WC9-type Star with Large Infrared Excess

Thé, P.S., Tjin A. Djie, H.R.E., Wamsteker, W. **84**, 263

TT Ari

Fast Photoelectric Photometry of the Nova-like Variable TT Ari

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TT Ari: A New Dwarf Nova

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New Evidence of Strong UV Radiation in TT Ari

Wargau, W., Drechsel, H., Rahe, J., Vogt, N. **110**, 281

TT Her

Photometric observations and elements of the eclipsing binary TT Herculis

Kwee, K.K., van Genderen, A.M. **126**, 94

TU Hor

Period and Spectroscopic Orbit of TU Hor

Duerbeck, H.W., Surdej, A., Surdej, J. **73**, 369; **36**, 283

TV Cas

Photometric Observations of the Algol Variable TV Cassiopeiae

Walter, K. **72**, 378; **35**, 281

A Long Period Variation in the Light Curve of TV Cassiopeiae and Its Interpretation

Walter, K. **76**, 369; **37**, 493

Infrared Observations of Binary Stars. II

Needham, J.D., Phillips, J.P., Selby, M.J., Sanchez Magro, C. **83**, 370

TV Cassiopeiae in the Utrecht photometric system

de Landtsheer, A.C. **121**, 329; **52**, 213

IUE observations of the eclipsing binaries TV Cas and YZ Cas

de Landtsheer, A.C., Mulder, P.S. **127**, 297

TV Cet

Four-colour Photometry of Eclipsing Binaries. XIIb. TV Cet, Light Curves, Photometric Elements, and Determination of Helium Content

Jørgensen, H.E. **72**, 356

Four-colour Photometry of Eclipsing Binaries. XXI A: TV Cet, Photometric Observations

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TW Cet

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Russo, G., Sollazzo, C., Maceroni, C., Milano, L. **106**, 378; **47**, 211

TW Hya

TW Hya: a T Tauri star far from any dark cloud
Rucinski, S.M., Krautter, J. **121**, 217

TX CVn

A Study of the Cataclysmic Variable TX CVn
Fried, J.W. **88**, 141

TX Her

Period Changes in Detached Close Binary Systems Due to Anisotropic Ejection of Mass
Van Hamme, W. **107**, 397
 The Period Behaviour of the Detached Close Binary System TX Herculis
Van Hamme, W. **107**, 409

TX UMa

Infrared Observations of Binary Stars. II
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TY Pup

Photometric Elements of the Eclipsing Binary TY Pup
Giuricin, G., Mardirossian, F. **99**, 182
 Determination of Parameters of W UMa Systems. III: CC Com, YY Eri, V502 Oph and TY Pup
Maceroni, C., Milano, L., Russo, G. **111**, 212; **49**, 123

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Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **95**, 210; **43**, 141
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Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **101**, 7
 Infrared photometry of the RS CVn binaries. I. TY Pyxidis
Antonopoulou, E. **120**, 85

TY UMa

Seasonal light curves of TY UMa: observations and solutions
Brogia, P., Conconi, P. **118**, 209; **51**, 97

TZ Boo

A 3.5 Year Secondary Period in the W UMa System TZ Bootis
Hoffmann, M. **85**, 267; **40**, 263

TZ Men

Photometric Elements of the Eclipsing Binary TZ Men
Giuricin, G., Mardirossian, F. **94**, 204

U Cep

Perturbations dans les courbes de lumière de U Cephei et calcul des éléments
Brogia, P., Conconi, P. **85**, 265; **40**, 135
 A Polarimetric Study of U Cephei. Part I
Pirola, V. **90**, 48

A Polarimetric Study of U Cephei. Part II (Observations)
Pirola, R. **100**, 334; **44**, 461

u Her

Interpretation of New BVR Lightcurves of u Herculis
Provoost, P. **81**, 17

U Ori

Is the 1612 MHz Flare of U Orionis Related to Its Light Curve?
Garrigue, J.P., Mennessier, M.O. **81**, L13

U Peg

Determination of Parameters of W UMa Systems. II: TW Cet, S Ant, U Peg, Er Ori
Russo, G., Sollazzo, C., Maceroni, C., Milano, L. **106**, 378; **47**, 211

UV Aur

Observations of an emission nebula associated with the carbon star UV Aur
Reimers, D., Groote, D. **123**, 257

UW CMa

Mass Loss from UW Canis Majoris
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 Phase-correlated P Cygni Profile Variations of the C III Multiplet in UW Canis Majoris
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 On the Period of the Interacting Binary UW Canis Majoris
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UZ Oct

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V Cyg

Observation of Continuum Emission between 1 and 4 mm from the Carbon Star V Cygni
Querci, M., Courtin, R., Querci, F., Coron, N., Gispert, R. **77**, 155

V Pup

Four-colour photometry of eclipsing binaries. XV B: light curves of V Puppis
Clausen, J.V., Nordström, B., Reipurth, B. **121**, 332; **52**, 323

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Taranova, O.G., Yudin, B.F. **117**, 209
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 A New 1720 MHz OH Outburst in V 1057 Cyg
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V 1182 Aql

Revised Photometric Elements of Five Eclipsing Binaries
Giuricin, G., Mardirossian, F. **102**, 282; **45**, 499

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The ultraviolet variability of the symbiotic star HBV 475
Nussbaumer, H., Schmutz, W. **126**, 59

V 1331 Cyg

Radial Velocities of Emission and Absorption Lines in the Spectrum of the Unusual T Tauri. Star V 1331 Cyg

Chavarria, C., Appenzeller, I., Bertout, C. **75**, 262; **36**, 465

IUE Observations of V 1331 Cyg

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V 1343 Aql

Correlations and periodicities of equivalent widths in SS 433

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V 337 Aql

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V 3955 Sgr a New Field RV Tauri/SRd Variable

Alvarez, H. **76**, 336

V 436 Cen

Photometry of V 436 Centauri During Superoutburst in May 1978

Semeniuk, I. **81**, 388; **39**, 29

V 471 Tau

Simultaneous Photoelectric and Single-trail Spectroscopic Observations of V 471 Tauri (BD + 16°516)

Hamzaoglu, E. **104**, 65

V 505 Sgr

Photometric Observations of the Algol Variable V 505 Sagittarii

Walter, K. **104**, 171; **46**, 263

V 505 Sr

Variations in the Light Curve of V 505 Sagittarii and their Interpretation

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V 523 Cas

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Dimensions and Evolutionary State of the Early-type Contact Binary V701 Scorpii

Andersen, J., Nordström, B., Wilson, R.E. **82**, 225

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Remarkable light changes of the active RS CVn system V 711 Tau (= HR 1099) during 1979-1981

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V 810 Cen

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van Genderen, A.M. **88**, 77

On the Nature of the 125-day Cepheid V 810 Cen (= HR 4511): IUE Spectra

Eichendorf, W., Heck, A., Isserstedt, J., Lub, J., Pakull, M., Reipurth, B., van Genderen, A.M. **93**, L5

On the Nature of the Two Supergiant Components in the System of V 810 Cen = HR 4511 = HD 101947

van Genderen, A.M. **100**, 175

V 861 Sco

IUE and Optical Observations of V 861 Scorpii

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Infrared and X-ray Observations of the Binary System V 861 Sco

Tanzi, E.G., Maraschi, L., Treves, A., Tarengi, M. **100**, 68

V 889 Aql

A Photometric Study of the Eclipsing Binary V 889 Aql: An Example of Relativistic Apsidal Motion

Giménez, A., Scaltriti, F. **115**, 321

vA 771

Spectroscopic Orbits for Three Double-lined Binaries in the Hyades Field, 22°669, vA 771, and vB 166

Griffin, R.F., Mayor, M., Gunn, J.E. **106**, 221

vB 166

Spectroscopic Orbits for Three Double-lined Binaries in the Hyades Field, 22°669, vA 771, and vB 166

Griffin, R.F., Mayor, M., Gunn, J.E. **106**, 221

Vega

High Resolution Profiles in A-type Stars. III. Vega C II and Si II UV Lines Observed with the Copernicus Satellite

Freire, R. **78**, 148

Spectral Analysis of Vega from Copernicus

Castelli, F., Faraggiana, R. **79**, 174

Non-LTE Analysis of the Ultraviolet Spectrum of A Type Stars.

I. Copernicus Observations of the Ly α Profile in Vega (A 0 V)

Praderie, F. **98**, 92

Non-LTE Analysis of the Ultraviolet Spectrum of A Type Stars. II. Theoretical Considerations and Interpretation of the Vega Lyman-alpha Region

Hubený, I. **98**, 96

Study of Stellar Polarization with the CERGA Interferometer

Vakili, F. **101**, 352

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Freire Ferrero, R., Gouttebroze, P., Kondo, Y. **121**, 59

Vela Pulsar

Pulsed High Energy Gamma Rays from Vela Pulsar

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New Upper Limits for Pulsed Soft X-rays from the Vela Pulsar PSR 0833-45

Zimmermann, H.U. **88**, 309

Vela X

Vela X and the Evolution of Plerions

Weiler, K.W., Panagia, N. **90**, 269

Vela X-1

On the Spin Down Episodes of Vela X-1

Molteni, D., Rapisarda, M., Re, S., Robba, N.R. **111**, 365

VV Cep

The UV Spectrum of VV Cep in 1978

Faraggiana, R. **76**, L18

VV Gp

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Möllenhoff, C., Schaifers, K. **94**, 333

VV Mon

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VV Pyx

Four-colour photometry of eclipsing binaries. XVI. Light curves of VV Pyxidis

Clausen, J.V., Nordström, B. **127**, 425; **54**, 149

VW Cep

Periodic Variations in the Light Curve of VW Cephei

Walter, K. **80**, 27

VW Hyi

The Outbursts of the Dwarf Nova VW Hydri: A Comparative Study of Short and Long Eruptions

Haefner, R., Schoembs, R., Vogt, N. **77**, 7

Photometry and Polarimetry of VW Hydri during the October 1978 Supermaximum

Schoembs, R., Vogt, N. **91**, 25

High-time Resolution Spectroscopy of VW Hydri and WX Hydri

Schoembs, R., Vogt, N. **97**, 185

VW Hydri revisited: conclusions on dwarf nova outburst models

Vogt, N. **118**, 95

V 553

V 553 Centauri and a Progression of Bumps in BL Herculis Light Curves

Petersen, J.O. **96**, 146

V 645 Cyg

An Unusual OH Maser Associated With V 645 Cygni

Morris, M., Kazès, I. **111**, 239

V 780 Tau

The flare activity of V 780 Tau

Pettersen, B.R. **120**, 192

V 861 Sco

On the System V 861 SCO \equiv OAO 1653-40

Tanzi, E.G., Treves, A., Salinari, P., Tarengi, M. **78**, 226

V 389 Cyg

Photoelectric Observations of the Peculiar Variable V 389 Cygni

Gieseke, F. **73**, 365; **36**, 37

V 535 Ara

Absolute Characteristics of the W UMa System V 535 Arae

Schöffel, E. **73**, 369; **36**, 287

V 539 Ara

A Photometric Analysis of V 539 Ara

Clausen, J.V. **73**, 365; **36**, 45

V 748 Cen

VBLUV Photometry of the Symbiotic High-latitude, Eclipsing System V 748 Cen (= Cen X-4?)

van Genderen, A.M. **73**, 183

V1016 Cyg

A Model for V 1016 Cyg Based on the Ultraviolet Spectrum

Nussbaumer, H., Schild, H. **101**, 118

V1331 Cyg

A Study of the Peculiar T Tauri Star V 1331 Cygni

Chavarria, C.K. **101**, 105

V470 Cyg

The Ellipsoidal Binary V470 Cygni

Russo, G., Milano, L., Maceroni, C. **109**, 368

V478 Cyg

A photometric study of the eclipsing binary V478 Cygni

Sezer, C., Güdür, N., Gülmen, Ö., Sengonca, H. **126**, 221; **53**, 363

V502 Oph

Determination of Parameters of W UMa Systems. III: CC Com, YY Eri, V502 Oph and TY Pup

Maceroni, C., Milano, L., Russo, G. **111**, 212; **49**, 123

V539 Ara

Spectroscopic observations of eclipsing binaries. V. Accurate mass determination for the B-type systems V539 Arae and ζ Phoenicis
Andersen, J. **118**, 255

V644 Her

Orbital Motion of the Pulsating Star V644 Her (Text in French)
Bardin, C., Imbert, M. **106**, 380; **47**, 319

V645 Cyg

An Unusual OH Maser Associated With V 645 Cygni
Morris, M., Kazès, I. **111**, 239

W Hya

IUE Observations of Two Late Type Stars: R Aql and W Hya
Kafatos, M., Michalitsianos, A.G., Hobbs, R.W. **92**, 320

W UMa

Four-colour *wby* Observations of W UMa
Limaluoto, S., Piirola, V. **73**, 364; **36**, 33

Wray 977 = WRA 977

Spectroscopic Observations of the Early Type B-Supergiant Wray 977 (4U 1223-62): Description of the Spectrum and Classification
Hammerschlag-Hensberge, G., de Loore, C., van den Heuvel, E.P.J., Zuiderwijk, E.J. **76**, 245
Spectroscopic Observations of WRA 977. Line Identifications and Interstellar Features
Bord, D.J. **77**, 309

WW Dra

Two-colour Photoelectric Lightcurves and Elements of WW Dra
Mardirossian, F., Mezzetti, M., Cester, B., Giuricin, G. **81**, 388; **39**, 73

WX Eri

Lightcurve synthesis of the semi-detached binaries LT Her, WX Eri, AW Cam
Russo, G., Milano, L. **121**, 331; **52**, 311

WX Hyi

High-time Resolution Spectroscopy of VW Hydri and WX Hydri
Schoembs, R., Vogt, N. **97**, 185

WY Hya

WY Hya: a Main Sequence Detached Binary System with Nearly Equal Members
Giuricin, G., Mardirossian, F., Mezzetti, M. **103**, 349

WZ Sge

The Physical Parameters of WZ Sge. II. Eclipse Analysis
Ritter, H., Schröder, R. **76**, 168
The Recent Outburst of the Dwarf Nova WZ Sagittae
Ortolani, S., Rafanelli, P., Rosino, L., Vittone, A. **87**, 31
A Study of the Spectrum of WZ Sge During Its 1978 Outburst
Friedjung, M. **99**, 226

X Gzu, TT Lyr

Revised Photometric Elements of Seven SD-Systems
Giuricin, G., Mardirossian, F., Predolin, F. **95**, 395; **32**, 251

X Per

On the Absence of Ellipsoidal Light Variations in X Per
Maceroni, C., Persi, P., Spada, G. **76**, 217
First Coordinated Campaign of X-ray and Ground Based Observations of X-Persei = 3 U 0352+30
de Loore, C., Altamore, A., Baratta, G.B., Bunner, A.N., Divan, L., Doazan, V., Hensberge, H., Sterken, C., Viotti, R. **78**, 287
IUE Observations of the Be Stars HD 102567 (4U1145-61), X Per and γ Cas
Hammerschlag-Hensberge, G., van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., de Loore, C., Glencross, W., Howarth, I., Willis, A.J., Wilson, R., Menzies, J. **85**, 119
IUE Observations of X Persei, the Proposed Optical Counterpart of the X-ray Source 4 U 0352+30
Bernacca, P.L., Bianchi, L. **94**, 345
Photometry of X Persei in Late 1978
Mazeh, T., Brosch, N. **95**, 3
IUE spectrophotometry of X Persei (4U 0352+30)
Bernacca, P.L., Bianchi, L., Dorren, J.D., Perryman, M.A.C. **122**, 17

XX Cam

Lithium and Barium in RCrB and XX Cam
Hunger, K., Schönberner, D., Steenbock, W. **107**, 93

XY Cas

Détermination des rayons de céphéides. I. Vitesses radiales et dimensions de XY Cas
Imbert, M. **99**, 404; **44**, 319

XY Cep, ZZ Cyg, RX Gem

Revised Photometric Elements of Seven SD-Systems
Giuricin, G., Mardirossian, F., Predolin, F. **95**, 395; **32**, 251

XZ Gmi

Revised Photometric Elements of the Eclipsing Binary XZ CMi
Mardirossian, F., Giuricin, G. **96**, 415

XZ Sgr

Photometric Investigation of the Algol System XZ Sagittarii
Kappelman, N., Walter, K. **78**, 249; **38**, 161

YY CMi

YY CMi: An Evolved Contact Binary System?
Giuricin, G., Mardirossian, F. **94**, 391

YY Eri

Determination of Parameters of W UMa Systems. III: CC Com, YY Eri, V502 Oph and TY Pup
Maceroni, C., Milano, L., Russo, G. **111**, 212; **49**, 123

YZ Cas

YZ Cassiopeiae and the Utrecht photometric system
de Landtsheer, A.C. **124**, 155; **53**, 161
IUE observations of the eclipsing binaries TV Cas and YZ Cas
de Landtsheer, A.C., Mulder, P.S. **127**, 297

YZ CMi

Starspots and stellar flares on EV Lac and YZ CMi
Pettersen, B.R., Kern, G.A., Evans, D.S. **123**, 184

Z Cha

Z Cha - New Evidence for Gravitational Waves?

Ritter, H. **86**, 204

 α Lupi

Frequency Analyses of Light and Radial Velocity Observations of

α Lup

Lampens, P., Goossens, M. **115**, 413

 α Cyg

Mass Loss from α Cyg (A2 Ia) Derived from the Profiles of Low Excitation Fe II Lines

Hensberge, H., Lamers, H.J.G.L.M., de Loore, C., Bruhweiler, F.C. **106**, 137

 α And

UV Observations and Variability of Alpha Andromedae

Rakos, K.D., Jenkner, H., Wood, J. **95**, 394; **43**, 209

 α Boo

The O I Triplet λ 7773 Å in Late-type Giant Stars

Eriksson, K., Toft, S.C. **71**, 178

A Comparison of Emission Lines in the Ultraviolet Spectra of α Boo (K 2 III p), α Tau (K 5 III), α Ori (M 1-21 a-b) and α Sco (M 1.51 ab + B2.5 V)

Hucht, K.A. van der, Stencel, R.A., Haisch, B.M., Kondo, Y. **75**, 260; **36**, 377

Non-resonance lines of neutral calcium in the spectra of Arcturus and β Virginis

Smith, G., Lambert, D.L. **117**, 177

 α Boo = Arcturus

A Contribution to the Determination of the Mass of Arcturus

Spite, M., Martin, P. **101**, 265

 α Cam

Short Time Changes in the Terminal Velocity of the Stellar Wind of α Cam (09.5 Ia)

de Jager, C., Lamers, H.J.G.L.M., Macchetto, F., Snow, T.P. **79**, L28

 α Cas, And, And, Per, Cyg

Stellar Diameter Measurements by Two-telescope Interferometry in Optical Wavelengths

Bonneau, D., Koechlin, L., Oneto, J.L., Vakili, F. **103**, 28

 α Col

Analysis of Rapid Variations in the Spectra of α Col by Cross Correlation

Bijaoui, A., Doazan, V. **73**, 285

 α Lyr

The Importance of Accurate Oscillator Strengths in Connection with Ultraviolet Stellar Spectra

Burger, M. **94**, 199

High resolution ultra-violet observations of alpha Lyrae using the University College London balloon-borne telescope system

Welsh, B.Y., Boksenberg, A., Anderson, B., Towlson, W.A. **126**, 335

 α Ori

A Comparison of Emission Lines in the Ultraviolet Spectra of α Boo (K 2 III p), α Tau (K 5 III), α Ori (M 1-21 a-b) and α Sco (M 1.51 ab + B2.5 V)

Hucht, K.A. van der, Stencel, R.A., Haisch, B.M., Kondo, Y. **75**, 260; **36**, 377

The Outer Atmosphere Structure of Three Late Type Stars

de Castro, E., Fernández-Figueroa, M.J., Rego, M. **113**, 94

The Angular Diameter of Betelgeuse

Balega, Y., Blazit, A., Bonneau, D., Koechlin, L., Foy, R., Labeyrie, A. **115**, 253

 α Sco

A Comparison of Emission Lines in the Ultraviolet Spectra of α Boo (K 2 III p), α Tau (K 5 III), α Ori (M 1-21 a-b) and α Sco (M 1.51 ab + B2.5 V)

Hucht, K.A. van der, Stencel, R.A., Haisch, B.M., Kondo, Y. **75**, 260; **36**, 377

Circumstellar Absorption Lines in the Ultraviolet Spectrum of α Scorpii (M1.5 Iab + B2.5 V)

van der Hucht, K.A., Bernat, A.P., Kondo, Y. **82**, 14

Multicolor Linear Polarimetry of Betelgeuse and Antares

Tinbergen, J., Greenberg, J.M., de Jager, C. **95**, 215

 α Tau

A Comparison of Emission Lines in the Ultraviolet Spectra of α Boo (K 2 III p), α Tau (K 5 III), α Ori (M 1-21 a-b) and α Sco (M 1.51 ab + B2.5 V)

Hucht, K.A. van der, Stencel, R.A., Haisch, B.M., Kondo, Y. **75**, 260; **36**, 377

 α Tra

Detection of Further Red Giants with "Hybrid" Atmospheres and a Possible Correlation with Double Circumstellar Mg II and Ca II Lines

Reimers, D. **107**, 292

 α Vir

Non-resonance lines of neutral calcium in the spectra of Arcturus and β Virginis

Smith, G., Lambert, D.L. **117**, 177

 α CMi

A Model Atmosphere Analysis of Procyon (α CMi, F5 IV-V)

Kato, K., Sadakane, K. **113**, 135

 β Cep

An Attempt to Detect Non-radial Pulsation in β Cephei

Schafgans, J.J., Tinbergen, J. **72**, 378; **35**, 279

 β CnV

Mg II and Ca II Emissions from Three G Dwarfs

Rego, M., Fernandez-Figueroa, M.J. **76**, 249

 β Com

Mg II and Ca II Emissions from Three G Dwarfs

Rego, M., Fernandez-Figueroa, M.J. **76**, 249

The Outer Atmosphere Structure of Three Late Type Stars

de Castro, E., Fernández-Figueroa, M.J., Rego, M. **113**, 94

β Dor

Ultraviolet Photometry of the Cepheid β Doradus from the A.N.S. Satellite

Lub, J., van Paradijs, J., Pel, J.W., Wesselius, P.R. **72**, 82

 β Hyi

The spectra of late type dwarfs and sub-dwarfs in the near ultraviolet. II. Limits to variability in Mg II emission from IUE spectrophotometry

Crivellari, L., Franco, M.L., Molaro, P., Vladilo, G., Beckman, J.E. **121**, 164; **52**, 135

 β Lyr

Accretion onto ZAMS Stars: Application to β Lyrae and Remarks on X-ray Binaries

Packet, W., Grève, J.P. **de 75**, 255

Narrow-band Photometry of β Lyrae in 1971

Scarfe, C.D. **81**, 388; **39**, 23

Progress on a Quantitative Model for Beta Lyrae

Wilson, R.E., Lapasset, E. **95**, 328

The BUSS spectrum of β Lyrae

Hack, M., Sahade, J., de Jager, C., Kondo, Y. **126**, 115

 β Ori

The Visible Spectrum of β Ori, B8 I

Crivellari, L., Flora, U., Rusconi, L., Sedmak, G. **73**, 365; **36**, 73

 β Per

Cinq premières campagnes d'observations systématiques de β Perseï à l'Astrolabe de l'Observatoire de Paris

Débarbat, S., Chollet, F., Clauzet, L.B.F., Feissel, M., Lam, S.K., Texier, P., Tomas, M., Vanhollebeke, J. **99**, 401; **44**, 189

 β Sco

The multiple system β Sco and the age of the Upper Scorpius complex

Giannuzzi, M.A. **125**, 302

 γ Ara

A search for rapid spectroscopic variability in the early-type supergiants γ and θ Ara

Baade, D. **124**, 211

 γ Boo

γ Boo, a Classical Evolved δ Scuti Star

Auvergne, M., Le Contel, J.-M., Baglin, A. **76**, 15

 γ Cas

Rapid Variations in the Polarization of the Be Star γ Cas

Pirola, V. **78**, 250; **38**, 193

IUE Observations of the Be Stars HD 102567 (4U1145-61), X Per and γ Cas

Hammerschlag-Hensberge, G., van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., de Loore, C., Glencross, W., Howarth, I., Willis, A.J., Wilson, R., Menzies, J. **85**, 119

The long-term variations of γ Cas in the visual

Doazan, V., Franco, M., Rusconi, L., Sedmak, G., Stalio, R. **128**, 171

 γ Equ

Spectrophotometry of Peculiar B and A Stars, X, HD 2453, HD 8441, HD 18078, HD 50169, HD 110066 and Gamma Equulei

Adelman, S.J. **99**, 403; **44**, 265

 γ Peg

Spectrographic Observations of the β CMA Variable Star γ Pegasi

Ducatel, D., Le Contel, J.-M., Sareyan, J.-P., Valtier, J.-C. **97**, 415; **43**, 359

Profile Variations of the Si III (4452 and 4568) Lines and Mg II (4481) Doublet in γ Peg

Le Contel, J.-M., Morel, P.-J. **107**, 406

 δ Lib

Revised Photometric Elements of the Eclipsing Binaries IU Aur and δ Lib

Giuricin, G., Mardirossian, F., Mezzetti, M., Cester, B. **76**, 369; **37**, 513

 δ Pav

Emissions from the transition regions and coronae of three cool dwarf stars

Fernández-Figueroa, M.J., de Castro, E., Rego, M. **119**, 243

The spectra of late type dwarfs and sub-dwarfs in the near ultraviolet. II. Limits to variability in Mg II emission from IUE spectrophotometry

Crivellari, L., Franco, M.L., Molaro, P., Vladilo, G., Beckman, J.E. **121**, 164; **52**, 135

 ϵ Aur

The Ultraviolet Spectrum of the Eclipsing Binary Epsilon Aurigae

Hack, M., Selvelli, P.L. **75**, 316

Dual Aspect of the Wavelength-dependent Fluctuations of ϵ Aurigae

Canavaggia, R. **83**, 105

The Mid-ultraviolet Spectrum of ϵ Aurigae

Castelli, F., Hoekstra, R., Kondo, Y. **115**, 217; **50**, 233

 ϵ Cep

B Band Photometry of ϵ Cep

Lopez de Coca, P., Costa, V., Rolland, A., Walker, E.N. **73**, 365; **36**, 61

 ϵ Eri

Epsilon Eridani: Active Chromosphere Associated with Enhanced Microturbulence

Steenbock, W., Holweger, H. **99**, 192

 ϵ Ind

A Model Atmosphere of the Late Type Dwarf ϵ Indi

Kollatschny, W. **86**, 308

 ϵ Per

Evidence of hourly variations in the deuterium Lyman line profiles toward ϵ Persei

Gry, C., Laurent, C., Vidal-Madjar, A. **124**, 99

 ζ Aur

The Ultraviolet Spectrum of the Eclipsing Binary Zeta Aurigae

Hack, M. **99**, 185

A Study of Ultraviolet Spectra of ζ Aur/VV Cep Systems. I. Resonance Line Formation

Hempe, K. **115**, 133

Mg II profile variations of Zeta Aurigae

Ahmad, I.A., Chapman, R.D., Kondo, Y. **126**, L5

A study of ultraviolet spectra of ζ Aur/VV Cep systems. II. Mass loss of supergiants in ζ Aur, 32 Cyg, and 31 Cyg

Che, A., Hempe, K., Reimers, D. **126**, 225

ζ Oph

Interstellar Carbon I Lines in ζ Puppis and ζ Ophiuchi
de Boer, K.S., Morton, D.C. **71**, 141

ζ Ori

Diffuse light near Zeta Orionis and the Horsehead nebula, and anomalous extinction of HD 37903, as measured with the ANS
de Boer, K.S. **125**, 258

ζ Phe

Spectroscopic observations of eclipsing binaries. V. Accurate mass determination for the B-type systems V539 Arae and ζ Phoenicis
Andersen, J. **118**, 255

ζ Pup

Interstellar Carbon I Lines in ζ Puppis and ζ Ophiuchi
de Boer, K.S., Morton, D.C. **71**, 141
The Expanding Envelope of Zeta Puppis: a Detailed UV-line Fit
Hamann, W.-R. **84**, 342
Non-LTE analysis of massive O-stars. II. The O4 star ζ Puppis
Kudritzki, R.P., Simon, K.P., Hamann, W.-R. **118**, 245

ζ¹ Sco

IUE Observations of the Extreme B 1 Supergiant ζ¹ Sco
Appenzeller, I. **77**, 372; **38**, 51
The UV Resonance Lines of ζ¹ Sco
Wolf, B., Appenzeller, I. **78**, 15
Variability and Mass Loss in the Extreme Supergiant ζ¹ Sco
Burki, G., Heck, A., Bianchi, L., Cassatella, A. **107**, 205

ζ Tau

Envelope structure of the cyclic V/R variable shell stars
Hubert-Delplace, A.M., Mon, M., Ungerer, V., Hirata, R., Paterson-Beeckmans, F., Hubert, H., Baade, D. **121**, 174

η Car

The Ultraviolet Spectrum and Expansion Velocity of η Carinae from IUE Observations
Cassatella, A., Giangrande, A., Viotti, R. **71**, L9
One-dimensional high resolution image reconstruction on Eta Carinae at 4.6 μm with speckle data
Chelli, A., Perrier, C., Biraud, Y.G. **117**, 199

η Cen

Can shell phases of Be stars be predicted on the basis of rapid spectroscopic micro-variability?
Baade, D. **124**, 283

θ Peg

Rapid Line Variability. IV. Constancy of Two Reported Variables
Breger, M., Light, A., Scholtes, M. **78**, 11

κ Cet

The Far-ultraviolet Spectrum of κ Cet Observed from IUE
Rego, M., Cornide, M., Fernández-Figueroa, M.J. **82**, 395; **39**, 251
The Transition Region Structure of κ Ceti
Fernández-Figueroa, M.J., de Castro, E., Rego, M. **99**, 141

κ Cnc

Line Blanketed Model Atmospheres of Ap-Stars. V. The Hg-Mn Stars 53 Tau and κ Cnc
Stepień, K., Muthsam, H. **100**, 159

A Search for Medium Z Elements in the Ultraviolet Spectrum of κ Cancri

Davidson, J.P., Bord, D.J. **111**, 362

κ Ori

H_α Profile Variability in κ Orionis, B0.5 Ia
Stalio, R., Rusconi, L., Sedmak, G., Arpigny, C., Georgelin, Y., Rocca, B. **77**, L10
A Study of H_α Profile Variations in κ Orionis, B0.5 Ia
Rusconi, L., Sedmak, G., Stalio, R., Arpigny, C. **92**, 324; **42**, 347
Monitoring Line Profile Changes in κ Orionis, B0.5 Ia
Stalio, R., Sedmak, G., Rusconi, L. **101**, 168

κ Psc

Spectrophotometry of peculiar B and A stars. XIII. HD 51418, 53 Camelopardalis, 78 Virginis, and Kappa Piscium
Pyper, D.M., Adelman, S.J. **119**, 324; **51**, 365

λ And

Model Chromospheres of RS CVn Stars: Balmer Line Profiles in λ Andromedae
Mullan, D.J., Cram, L.E. **108**, 251

λ CrB

Absorption Line Symmetries for Two HgMn Stars
Rice, J.B., Wehlau, W.H. **106**, 7

ν Her

On the Detection of Abundance Stratifications in Peculiar Stars Through the Curve of Growth Method
Alecian, G. **107**, 61

ν Sgr

The Ultraviolet Spectrum of Upsilon Sagittarii
Dwignau, H., Friedjung, M., Hack, M. **71**, 310
The Evolutionary Status of Upsilon Sagittarii (=HD 181615) as Derived from Ultraviolet and Visual Observations
Hellings, P., de Loore, C., Burger, M., Lamers, H.J.G.L.M. **101**, 161

ξ Phe

Probable Periodicities of the Ap Stars ξ Phe and HD 30849
Renson, P. **77**, 366

ξ Tuc

The spectra of late type dwarfs and sub-dwarfs in the near ultraviolet. II. Limits to variability in Mg II emission from IUE spectrophotometry
Crivellari, L., Franco, M.L., Molaro, P., Vladilo, G., Beckman, J.E. **121**, 164; **52**, 135

o And

New Photoelectric Observations of the Shell Star o And
Guerrero, G., Mantegazza, L. **75**, 262; **36**, 471

θ Ara

A search for rapid spectroscopic variability in the early-type supergiants γ and θ Ara
Baade, D. **124**, 211

θ Her

Detection of Further Red Giants with "Hybrid" Atmospheres and a Possible Correlation with Double Circumstellar Mg II and Ca II Lines

Reimers, D. **107**, 292

 θ Vel

On the variability of θ Vel

Haefner, R., Wuensch, J. **127**, 413

 θ^2 Cru

X-ray Observations of Single-line Spectroscopic Binaries

Singh, K.P., Naranan, S. **113**, 167

Erratum: X-ray observations of single-line spectroscopic binaries

Singh, K.P., Naranan, S. **120**, 326

 π Aqr

Ultraviolet Observations of 27 Canis Majoris, π Aquarii and 48 Librae

Ringuet, A.E., Fontenla, J.M., Rovira, M. **100**, 79

 π^5 Ori

X-ray Observations of Single-line Spectroscopic Binaries

Singh, K.P., Naranan, S. **113**, 167

Erratum: X-ray observations of single-line spectroscopic binaries

Singh, K.P., Naranan, S. **120**, 326

 σ OriE;

Shell and Photosphere of σ OriE: New Observations and Improved Model

Groote, D., Hunger, K. **116**, 64

 σ And

Rapid Line Variability. IV. Constancy of Two Reported Variables

Breger, M., Light, A., Scholtes, M. **78**, 11

 σ Sco

The Pulsation of the Outer Layers of the Beta Cephei Star σ Sco

Burger, M., de Jager, C., van den Oord, G.H.J. **109**, 289

 τ Aur

Detection of Further Red Giants with "Hybrid" Atmospheres and a Possible Correlation with Double Circumstellar Mg II and Ca II Lines

Reimers, D. **107**, 292

 τ Cet

Mg II and Ca II Emissions from Three G Dwarfs

Rego, M., Fernandez-Figueroa, M.J. **76**, 249

Emissions from the transition regions and coronae of three cool dwarf stars

Fernández-Figueroa, M.J., de Castro, E., Rego, M. **119**, 243

The spectra of late type dwarfs and sub-dwarfs in the near ultraviolet. II. Limits to variability in Mg II emission from IUE spectrophotometry

Crivellari, L., Franco, M.L., Molaro, P., Vladilo, G., Beckman, J.E. **121**, 164; **52**, 135

 τ Sco

The Expanding Envelope of Tau Scorpis: A Detailed UV-line Fit

Hamann, W.-R. **100**, 169

 μ Cep

A New Analysis of Light Variations in μ Cephei

Mantegazza, L. **111**, 295

1E0643-1648

First Ultraviolet Observations of Two New Cataclysmic Variables 1 E0643-1648 and 4 U1849-31

Bonnet-Bidaud, J.M., Mouchet, M., Motch, C. **112**, 355

10 Aqu

Spectrophotometry of Peculiar B and A Stars. XI. HD 89069, HD 165474, 10 Aquilae, HD 191742, HD 192678, and HD 204411

Adelman, S.J. **99**, 404; **44**, 309

112 Her

X-ray Observations of Single-line Spectroscopic Binaries

Singh, K.P., Naranan, S. **113**, 167

Erratum: X-ray observations of single-line spectroscopic binaries

Singh, K.P., Naranan, S. **120**, 326

14 Psc

An improved position of 14 Piscium

Bien, R., Schwan, H. **124**, L7

16 Cyg

Contribution to the Search for Solar Spectral Analogs. An Analysis of 16 Cyg A and B

Perrin, M.-N., Spite, M. **94**, 207

16 Cyg B

The Sun among the stars. VII. The H α profile of the Sun and the solar analog 16 Cygni B

Hardorp, J., Tomkin, J. **127**, 277

16 Lac

A spectrographic study of the β Cephei star 16 Lacertae

Le Contel, J.-M., Ducatel, D., Jarzabowski, T., Jerzykiewicz, M., Valtier, J.-C. **118**, 294

The β Cephei eclipsing binary system 16 Lacertae

Garrido, R., Sareyan, J.-P., Gimenez, A., Valtier, J.-C., Delgado, A.J., le Contel, J.-M., Ducatel, D. **122**, 193

2S0921-630

Color Variability and Optical Light Curve of 2S0921-630

Chevalier, C., Ilovaisky, S.A. **112**, 68

2A 0311-227

Simultaneous Spectroscopic and Photometric Observations of 2A0311-227

van Paradijs, J., Verbunt, F., van den Heuvel, E.P.J., van der Linden, T.J., Brond, J., van Leeuwen, F. **103**, 209; **46**, 89

Visual and Near Infrared Photometry of 2A 0311-227

Motch, C., van Paradijs, J., Pedersen, H., Ilovaisky, S.A., Chevalier, C. **110**, 316

2A 0526-328

A Photometric Study of 2A 0526-328

Motch, Ch. **100**, 277

2S 0921-630

Optical Eclipses in 2S 0921-630

Chevalier, C., Ilovaisky, S.A. **93**, L3

Optical Eclipses in 2S 0921-630

Chevalier, C., Ilovaisky, S.A. **94**, L3**20 CVn**

Study of the variability of the Delta Scuti stars. VII. The problem of stability and monop periodicity in 20 CVn

Bossi, M., Guerrero, G., Mantegazza, L., Scardia, M. **126**, 222; **53**, 399**20°669**

Spectroscopic Orbits for Three Double-lined Binaries in the Hyades Field, 22°669, vA 771, and vB 166

Griffin, R.F., Mayor, M., Gum, J.E. **106**, 221**209 BAC**

The Fastest Runaway Wolf-Rayet Star of Population I in the Galaxy, 209 BAC: Evidence for a Low Mass Companion

Moffat, A.F.J., Lamontagne, R., Seggewiss, W. **114**, 135**21 Ari**

Is 21 Ari = COU 79 a Multiple System?

Couteau, P., Morel, P.-J. **105**, 323**21 Com**

The Periods of 21 Com

Weiss, W.W., Breger, M., Rakosch, K.D. **90**, 18**21 Vul**21 Vul a New Luminous Long Period γ Scuti Star*Garrido, R., Saez, M.* **79**, 347**22 Boo**

The Atmospheric Abundances of the Giant Am Star 22 Bootis

Burkhart, C., Van't Veer, C., Couprie, M.F. **92**, 132**27 CMa**Ultraviolet Observations of 27 Canis Majoris, π Aquarii and 48 Librae*Ringuelet, A.E., Fontenla, J.M., Rovira, M.* **100**, 79

Envelope structure of the cyclic V/R variable shell stars

Hubert-Delplace, A.M., Mon, M., Ungerer, V., Hirata, R., Paterson-Beeckmans, F., Hubert, H., Baade, D. **121**, 174**28 CMa**

An Usually Short Stable Period of Absorption Line Asymmetries and V/R Variations in the Spectrum of the Be Star 28 CMa

Baade, D. **105**, 65

Does 28 CMa have a Photometric Period Differing from Its Spectroscopic Period?

Baade, D. **110**, L15**31 Cyg**A study of ultraviolet spectra of ζ Aur/VV Cep systems. II. Mass loss of supergiants in ζ Aur, 32 Cyg, and 31 Cyg*Che, A., Hempe, K., Reimers, D.* **126**, 225**32 Cyg**On Excitation Through Radiative Pumping of the Fe II UV-Mult. 191 $\lambda\lambda$ 1785-88 Å Observed with IUE during the Eclipse of 32 Cyg*Hempe, K., Reimers, D.* **107**, 36A Study of Ultraviolet Spectra of ζ Aur/VV Cep Systems. I. Resonance Line Formation*Hempe, K.* **115**, 133

Detection of a stellar prominence of the K supergiant 32 Cyg

Schröder, K.-P. **124**, L16A study of ultraviolet spectra of ζ Aur/VV Cep systems. II. Mass loss of supergiants in ζ Aur, 32 Cyg, and 31 Cyg*Che, A., Hempe, K., Reimers, D.* **126**, 225**32 Vir**

Light variations of the Am star 32 Vir

Bartolini, C., Grilli, F., Parmeggiani, G., Piccioni, A., Silveri, P. **124**, 155; **53**, 139**33 Lib**

Spectrophotometry of Peculiar B and A Stars. IX. HD 5797, HD 12288, 9 Tauri, HD 81009, HD 111133, 33 Librae, and HD 216533

Adelman, S.J. **95**, 393; **43**, 183**38 Cnc**

Study of the Variability of the Delta Scuti Stars. I. Photometric Observations of the Star 38 Cancr

Guerrero, G., Mantegazza, L., Scardia, M. **78**, 250; **38**, 181**4 U 1626-67**

Some Aspects of Low-mass Close Binary Models for Bright Galactic Bulge X-ray Sources and 4 U 1626-67

Kieboom, K.H., Verbunt, F. **95**, L11**4 U 1700-37**

A Model for 4 U 1700-37

Brinkmann, W. **94**, 323**4 U 2129+47**

Photoelectric Photometry of 4 U 2129+47

Calafat, R., Canal, R., Núñez, J., Torra, J. **110**, 23**4U0115+63**

On Stellar Wind Accretion in Widely Separated X-ray Binaries, and the Nature of 4U0115+63

Avni, Y., Goldman, I. **102**, 12**4U1849-31**

First Ultraviolet Observations of Two New Cataclysmic Variables 1 E0643-1648 and 4 U1849-31

Bonnet-Bidaud, J.M., Mouchet, M., Motch, C. **112**, 355**4 U 0531-05**

Copernicus Observations of Theta-2, OriA, a Proposed Optical Counterpart of the X-ray Source 4 U 0531-05

Bernacca, P.L., Bianchi, L. **75**, 61**4 U 1538-52**

Optical Light Curve of the X-ray Binary 4 U 1538-52

Ilovaisky, S.A., Chevalier, C., Motch, C. **75**, 258**4Z CMi**

On "Negative Flares" and "Dips" of UV Cet-type Stars

Rodonò, M., Pucillo, M., Sedmak, G., de Biase, G.A. **76**, 242**4 U 1538-52**

Optical Light Curve of the X-ray Binary 4 U 1538-52

Ilovaisky, S.A., Chevalier, C., Motch, C. **71**, L17

44 i Boo

Infrared Light Curves of the Contact Binary 44 i Bootis

Bergeat, J., van't Veer, F., Lunel, M., Garnier, R., Sibille, F., Roux, S. **94**, 350

Infrared Light Curves of the Contact Binary 44 i Bootis

Bergeat, J., Van't Veer, F., Lunel, M., Garnier, R., Sibille, F., Roux, S. **95**, 395; **43**, 257

Determination of Parameters of W UMa Systems. I: AE Phe, AQ Tuc, 44 i Boo

Maceroni, C., Milano, L., Russo, G., Sollazzo, C. **102**, 279; **45**, 187

48 Lib

On the Shell Spectrum of 48 Librae

Garcia-Alegre, M.C., Lopez Arroyo, M. **83**, 163

Ultraviolet Observations of 27 Canis Majoris, π Aquarii and 48 Librae

Ringuelet, A.E., Fontenla, J.M., Rovira, M. **100**, 79

48 Lin

Envelope structure of the cyclic V/R variable shell stars

Hubert-Delplace, A.M., Mon, M., Ungerer, V., Hirata, R., Paterson-Beeckmans, F., Hubert, H., Baade, D. **121**, 174

53 Cam

Spectrophotometry of peculiar B and A stars. XIII. HD 51418, 53 Camelopardalis, 78 Virginis, and Kappa Piscium

Pyper, D.M., Adelman, S.J. **119**, 324; **51**, 365

53 Psc

53 Piscium, a Confirmed β CMa Variable Star

Sareyan, J.-P., Le Contel, J.-M., Ducatel, D., Valtier, J.-C. **72**, 313

53 Tau

Line Blanketed Model Atmospheres of Ap-Stars. V. The Hg-Mn Stars 53 Tau and κ Cnc

Stepień, K., Muthsam, H. **100**, 159

59 Cyg

The Recent Peculiar Behaviour of the Be Star, HD 200120, 59 Cyg

Hubert-Delplace, A.M., Hubert, H. **99**, 204; **44**, 109

61 Cyg A

Emissions from the transition regions and coronae of three cool dwarf stars

Fernández-Figueroa, M.J., de Castro, E., Rego, M. **119**, 243

64 Psc

64 Piscium, a Double Line Spectroscopic Binary, Discussion on Orbital Elements

Nadal, R., Ginestet, N., Carquillat, J.-M., Pédoussaut, A. **71**, 273; **35**, 203

69 Ori

Spectroscopic and Photometric Observations of the Be Star 69 Orionis

Bossi, M., Guerrero, G., Mantegazza, L., Rusconi, L., Scardia, M., Sedmak, G. **104**, 169; **46**, 173

69 Tau

Study of the variability of the Delta Scuti stars. VI. Pulsational behaviour of HR 1392 (69 Tau)

Bossi, M., Guerrero, G., Mantegazza, L., Scardia, M. **126**, 222; **53**, 395

7 A.88 Her

Properties and nature of Be and shell stars. 7 A.88 Her: observational data, their reduction and basic evaluation

Doazan, V., Harmanec, P., Koubsky, P., Krpata, J., Zdarsky, F. **117**, 172; **50**, 481

70 Oph

Theoretical Stellar Chromospheres of Late Type Stars. III. Models for Procyon, Capella, Pollux, and 70 Ophiuchi A

Schmitz, F., Ulmschneider, P. **84**, 191

78 Vir

Spectrophotometry of peculiar B and A stars. XIII. HD 51418, 53 Camelopardalis, 78 Virginis, and Kappa Piscium

Pyper, D.M., Adelman, S.J. **119**, 324; **51**, 365

88 Her

Properties and Nature of Be and Shell Stars. 7 B.88 Her - An Important Clue to Understanding the Be Phenomenon?

Doazan, V., Harmanec, P., Koubsky, P., Krpata, J., Zdarsky, F. **115**, 138

Stellar Atmospheres, see also under the different Types of Stars, and Abundances, stellar; Stellar Coronae, Stellar Chromospheres
Limb Darkening Coefficients from Line Blanketed Model Atmospheres

Muthsam, H. **71**, 274; **35**, 253

Theoretical B-V Color Indices and Bolometric Corrections for Hot Horizontal Branch Stars

Rossi, L. **74**, 195

Metal Abundances and Microturbulence in Seven Solar-type Stars. II. Model Atmosphere Analyses

Gehren, T. **75**, 73

A Comparison of Emission Lines in the Ultraviolet Spectra of α Boo (K 2 III p), α Tau (K 5 III), α Ori (M 1-21 a-b) and α Sco (M 1.51 ab + B 2.5 V)

Hucht, K.A. van der, Stencel, R.A., Haisch, B.M., Kondo, Y. **75**, 260; **36**, 377

Infrared Limb-darkening Coefficients for Late-type Giant Model Atmospheres

Manduca, A. **75**, 261; **36**, 411

Non-LTE Transfer with Convective Transport of Excited Atoms

Oxenius, J. **76**, 312

Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. I. The Method

Leroy, B., Bel, N. **78**, 129

Apparent Spectral Inconsistencies Due to the Gravity Darkening of Pole-on Rapidly-rotating B-type Stars

Kodaira, K., Hoekstra, R. **78**, 292

The Expanding Envelope of Zeta Puppis: a Detailed UV-line Fit

Hamann, W.-R. **84**, 342

On the Helium Stratification in Model Atmospheres

Giannone, P., Rossi, L. **85**, 252

The Effect of Lyman-alpha on the Non-LTE Model Atmospheres of A Type Stars

Hubený, I. **86**, 225

- A Model Atmosphere of the Late Type Dwarf ϵ Indi
Kollatschny, W. **86**, 308
- An Automatic Procedure for a Determination of the Effective Temperature and Gravity. Application to 100 O-type Stars
Morossi, C., Crivellari, L. **89**, 251; **41**, 299
- Simulation of Variable Ultraviolet Line Blanketing in Ap Si Stars
Borsenberger, J., Jamar, C. **91**, 247
- Small-scale Velocity Fields and Mean Line Profiles
Durrant, C.J. **91**, 251
- Spectroscopic Analysis of Pollux Relative to the Sun with Special Reference to Arcturus
Ruland, F., Holweger, H., Griffin, R., Griffin, R., Biehl, D. **92**, 70
- The Method of Addition of Layers to Solve Non-linear Radiative Transfer Problems
Gros, M., Magnan, C. **93**, 150
- Line Formation in Expanding Atmospheres: On the Validity of the Sobolev Approximation
Hamann, W.-R. **93**, 353
- In Search of Real Solar Twins
Cayrel de Strobel, G., Knowles, N., Hernandez, G., Bentolila, C. **94**, 1
- The Importance of Accurate Oscillator Strengths in Connection with Ultraviolet Stellar Spectra
Burger, M. **94**, 199
- Contribution to the Search for Solar Spectral Analogs. An Analysis of 16 Cyg A and B
Perrin, M.-N., Spite, M. **94**, 207
- Non-LTE Calculations of N II Line Strengths in B-Type Stars
Dufton, P.L., Hibbert, A. **95**, 24
- Multicolor Linear Polarimetry of Betelgeuse and Antares
Tinbergen, J., Greenberg, J.M., de Jager, C. **95**, 215
- Absolute Transition Probabilities in the Spectra of Eu I and Eu II. I. Lifetime Measurements
Meyer, G., Ruland, W., Sahm, A., zu Putlitz, G. **95**, 278
- Evidence for Autoionization and Dielectronic Recombination of Si II in the Atmospheres of B-type Stars
Underhill, A.B. **97**, L9
- Geneva Photometric Boxes. I. A Topological Approach of Photometry and Tests
Nicolet, B. **97**, 85
- Non-LTE Analysis of the Ultraviolet Spectrum of A Type Stars. I. Copernicus Observations of the Ly α Profile in Vega (A 0 V)
Praderie, F. **98**, 92
- Non-LTE Analysis of the Ultraviolet Spectrum of A Type Stars. II. Theoretical Considerations and Interpretation of the Vega Lyman-alpha Region
Hubený, I. **98**, 96
- Spectral Energy Distribution and Effective Temperature Scale of M-giant Stars. II. Application of the Infra-red Flux Method
Tsuji, T. **99**, 48
- The Temperature Scale of Solar-type Stars
Gehren, T. **100**, 97
- On the Importance of Convective Transport of Excited Atoms in Stellar Atmospheres
Hubený, I. **100**, 314
- Spectroscopic Study of the Infrared Ca II Triplet in S-type Mira Variable Stars
Contadakis, M.E., Solf, J. **101**, 241
- UV Observations of the Intermediate Helium Star CPD-46° 3093
Heber, U., Hunger, K. **101**, 269
- A Spectral Description and Non-LTE Analysis of 6 Central Stars of Planetary Nebulae
Méndez, R.H., Kudritzki, R.P., Gruschinske, J., Simon, K.P. **101**, 323
- Study of Stellar Polarization with the CERGA Interferometer
Vakili, F. **101**, 352
- A High Resolution IUE Spectrum of the GO-G 5 Ia Supergiant HR 8752
Stickland, D.J., Lambert, D.L. **102**, 296
- Detailed Analysis of a G Supergiant in the Small Magellanic Cloud
Foy, R. **103**, 135
- Diffusion Models for Magnetic Ap-Bp Stars
Michaud, G., Mégessier, C., Charland, Y. **103**, 244
- High Resolution Spectrophotometry of the O I Line (8446 Å) Towards Cyg OB2 No. 12
Iyengar, K.V.K., Stafella, F., Cosmovici, C.B. **103**, 382
- "P Cygni" Profiles in P Cygni
Goldberg, L. **104**, L7
- Relations Between Some Photometric Temperature Parameters
Meylan, G., Hauck, B. **104**, 171; **46**, 281
- Effective Temperatures, and Radii of Luminous O and B Stars: A Test for the Accuracy of the Model Atmospheres
Remie, H., Lamers, H.J.G.L.M. **105**, 85
- NLTE Model Atmospheres for Early-type Stars of Various Chemical Compositions and Resulting Emission-line Spectra for Surrounding H II Regions
Borsenberger, J., Stasińska, G. **106**, 158
- Spectra of the Red (2,0) CN Band in 31 G and K Giant Stars
Kjaergaard, P., Walker, G.A.H., Yang, S. **106**, 180; **46**, 375
- The Diameter of Mira
Bonneau, D., Foy, R., Blazit, A., Labeyrie, A. **106**, 235
- An Alternative Derivation of the Line Transfer Equation of an Arbitrarily Polarized Radiation in the Presence of a Magnetic Field, in non-LTE
Mathys, G. **108**, 213
- Incompressible Convection in a Radiating Atmosphere. I. General Characteristics
Legait, A. **108**, 287
- Effect of Spots on a Star's Radius and Luminosity
Spruit, H.C. **108**, 348
- The Flow of Heat near a Starspot
Spruit, H.C. **108**, 356
- Angle-averaged Redistribution Function in the Laboratory Frame
Seitz, M., Baschek, B., Wehrse, R. **109**, 10
- Radiative Transfer: Comparison of Finite Difference Equations
Kalkofen, W., Wehrse, R. **110**, 18
- Expected Broadband Linear Polarization from Cool Stars with Magnetic Structures
Landi Degl'Innocenti, E. **110**, 25
- The Spectrum of FG Sge in 1979 - 1980. I. $\lambda\lambda$ 3700-5000 Å
Acker, A., Jaschek, M., Gleizes, F. **110**, 181; **48**, 363
- Polarimetric Observations of HD 199178 - an FK Comae Type Star
Pirola, V., Vilhu, O. **110**, 351
- Molecules in Red-giant Stars. I. Column Densities in Models for K and M Stars
Johnson, H.R., Sawal, A.J. **111**, 210; **49**, 77
- A New Analysis of Light Variations in μ Cephei
Mantegazza, L. **111**, 295

Super-critical X-ray Luminosities: The Structure and Stability of a Radiation-supported Plasma Layer

Wang, Y.-M. **112**, 24

The Ultraviolet Spectrum of KQ Puppis (Boss 1985)

Altamore, A., Giangrande, A., Viotti, R. **112**, 179; **49**, 511

Broadband Linear Polarization from Magnetized Stellar Atmospheres. Numerical Tables for the Magnetic Intensification Mechanism

Landi Degl'Innocenti, E., Calamai, G. **112**, 395; **49**, 677

A Model Atmosphere Analysis of Procyon (α CMi, F5 IV-V)

Kato, K., Sadakane, K. **113**, 135

Observed and Computed UV Spectral Distribution of A and F Stars. Determination of T_e and $\log g$

Malagnini, M.L., Faraggiana, R., Morossi, C., Crivellari, L. **114**, 170

The Angular Diameter of Betelgeuse

Balega, Y., Blazit, A., Bonneau, D., Koehlin, L., Foy, R., Labeyrie, A. **115**, 253

More on the reflection nebula surrounding HD 87643 and the non-uniform atmosphere of the central star

Surdej, J., Swings, J.P. **117**, 359

Non-LTE analysis of massive O stars. II. The O4 star ζ Puppis

Kudritzki, R.P., Simon, K.P., Hamann, W.-R. **118**, 245

MHD wave motion in magnetically structured atmospheres

Rae, I.C., Roberts, B. **119**, 28

Stellar coronae: What can be predicted with minimum flux models?

Hammer, R., Endler, F., Ulmschneider, P. **120**, 141

Coronae and winds in evolving stars

Robbrecht, W., de Loore, C., Olson, G. **121**, 286

A photometric atlas of the spectrum of γ Tauri $\lambda\lambda$ 5186-8700 Å

Appelquist, L., Andersen, J., Fisher, W.A., Fletcher, J.M., Kjaergaard, P. **121**, 330; **52**, 237

A search for UV-line profile variability in five O-stars

Franco, M.L., Kontizas, E., Kontizas, M., Stalio, R. **122**, 9

The missing UV opacity and the colours of solar-type stars

Magain, P. **122**, 225

Determination of the atmospheric parameters of late-type stars from low resolution spectra

Thévenin, F., Foy, R. **122**, 261

Non-LTE analysis of massive O stars. III. The O3 stars HD 93128, HD 93129 A, and HDE 303308

Simon, K.P., Jonas, G., Kudritzki, R.P., Rahe, J. **125**, 34

Determination of effective temperatures for hot stars from integrated fluxes

Tobin, W. **125**, 168

Magnesium II line formation: the contribution of high atomic levels to the resonance lines

Lemaire, P., Gouttebroze, P. **125**, 241

Broadband linear polarization from magnetized stellar atmospheres. II. The influence of damping on net spectral line polarization

Calamai, G., Landi Degl'Innocenti, E. **126**, 220; **53**, 311

Barium, magnesium, and iron in seven chemically unevolved stars and the nuclear evolution of the galactic disk

Steenbock, W. **126**, 325

Acoustic waves in early-type stars. I. An efficient method for the computation of thermodynamic quantities in time-dependent stellar atmosphere calculations

Wolf, B.E. **127**, 93

Fundamental relationships relevant to the transfer of polarized light in a scattering atmosphere

Hovenier, J.W., van der Mee, C.V.M. **128**, 1

On radiative shocks in atomic and molecular stellar atmospheres.

I. Dominant physical phenomena

Gillet, D., Lafon, J.-P. **128**, 53

Analysis of three K-type dwarf stars: HD 10476, HD 17925, and HD 37394

Perrin, M.-N. **128**, 347

Observed and computed spectral distribution of early-type stars.

II. Determination of T_e for B5-A0 stars

Malagnini, M.L., Faraggiana, R., Morossi, C. **128**, 375

Stellar Chromospheres

Ca II Emission from Stellar Chromospheres

Cram, L.E., Krikorian, R., Jefferies, J.T. **71**, 14

High Resolution Profiles in A Type Stars. The Ca II K Line in Sirius

Griffin, R., Griffin, R. **71**, 36

High Resolution Profiles in A-type Stars. The Ca II K Lines in Sirius—Comments

Czarny, J., Felenbok, P. **71**, 38

The Radio Emission of Betelgeuse

Altenhoff, W.J., Oster, L., Wendker, H.J. **73**, L21

Photoelectric Observations of Stars with Variable H and K Emission Components. III

Blanco, C., Catalano, S., Marilli, E. **73**, 370; **36**, 297

Theoretical Temperature Minima for Arcturus (K 2 IIIp), a Possible Explanation of the Wilson Bappu Effect

Ulmschneider, P., Schmitz, F., Hammer, R. **74**, 229

The UV Spectrum of VV Cep in 1978

Faraggiana, R. **76**, L18

High Resolution Profiles in A-type Stars. III. Vega C II and Si II

UV Lines Observed with the Copernicus Satellite

Freire, R. **78**, 148

Photoelectric Calibration of the H and K Lines and Nearby Continuum of Late Type Stars

Catalano, S. **80**, 317

Theoretical Stellar Chromospheres of Late Type Stars. IV. Temperature Minima for Dwarf Stars

Schmitz, F., Ulmschneider, P. **84**, 93

Theoretical Stellar Chromospheres of Late Type Stars. III. Models for Procyon, Capella, Pollux, and 70 Ophiuchi A

Schmitz, F., Ulmschneider, P. **84**, 191

A Scheme of Atmospheric Regions. III. Chromospheres of Emission-line Stars: I. Formation of H α Emission Line Cores in T Tauri-type Stars

Heidmann, N., Thomas, R.N. **87**, 36

On Time-dependent Ionization in Stellar Chromospheres

Kneer, F. **87**, 229

Sunspot Chromospheres and Their Relation to the Chromospheres of Late Main Sequence Stars

Mattig, W., Kneer, F. **93**, 20

Theoretical Stellar Chromospheres of Late Type Stars. V. Temperature Minimum in the Grey LTE Approach

Schmitz, F., Ulmschneider, P. **93**, 178

IUE MG II Doublet Observations in F and G Main Sequence Stars

García-Alegre, M.C., Ponz, J.D., Vázquez, M. **96**, 17

Search for Chromospheres in A-type Stars

Dravins, D. **96**, 64

Radio Emission and Chromosphere of Betelgeuse

Wischniewski, E., Wendker, H.J. **96**, 102

Indications for Rotation Modulation and Short-term Variations in the Ca II H and K Emission from Cool Main Sequence Stars

Middelkoop, F., Vaughan, A.H., Preston, G.W. **96**, 401

Acoustic Waves in the Solar Atmosphere. VI. Feautrier Type Radiation Treatment

Wolf, B.E., Schmitz, F., Ulmschneider, P. **97**, 101

Ca II H and K Chromospheric Emission in F- and G-type Stars

Dravins, D. **98**, 367

The Transition Region Structure of κ Ceti

Fernández-Figueroa, M.J., de Castro, E., Rego, M. **99**, 141

Epsilon Eridani: Active Chromosphere Associated with Enhanced Microturbulence

Steenbock, W., Holweger, H. **99**, 192

Magnetic Structure in Cool Stars. I. The Ca II H and K Emission from Giants

Middelkoop, F., Zwaan, C. **101**, 26

Magnetic Structure in Cool Stars. III. Ca II H and K Emission and Rotation of Main-sequence Stars

Middelkoop, F. **101**, 295

Simultaneous Photoelectric and Single-trail Spectroscopic Observations of V 471 Tauri (BD +16° 516)

Hamzaoglu, E. **104**, 65

Theoretical Models of Homogeneous Chromospheres for Main Sequence Stars

Musielak, Z. **105**, 23

Heating of Stellar Chromospheres when Magnetic Fields are Present

Ulmschneider, P., Stein, R.F. **106**, 9

The Variable Shell Star HR 5999. VI. Strong Chromospheric and Transition Region Emission Lines in the Ultraviolet Spectrum of a Herbig Ae Star

Tjin A Djie, H.R.E., Thé, P.S., Hack, M., Selvelli, P.L. **106**, 98

Magnetic Structure in Cool Stars. IV. Rotation and Ca II H and K Emission of Main-sequence Stars

Middelkoop, F. **107**, 31

Mg II h and k Line Observations of Delta Scuti Variables

Fracassini, M., Pasinetti, L.E. **107**, 326

Model Chromospheres of RS CVn Stars: Balmer Line Profiles in λ Andromedae

Mullan, D.J., Cram, L.E. **108**, 251

Magnetic Structure in Cool Stars. V. Chromospheric and Transition-region Emission from Giants

Oranje, B.J., Zwaan, C., Middelkoop, F. **110**, 30

On the Structure of the Outer Layers of Cool Carbon Stars

Querci, F., Querci, M., Wing, R.F., Cassatella, A., Heck, A. **111**, 120

Magnetic Structure in Cool Stars. VI. Ca II H and K Fluxes from Evolved Stars

Middelkoop, F. **113**, 1

The Outer Atmosphere Structure of Three Late Type Stars

de Castro, E., Fernández-Figueroa, M.J., Rego, M. **113**, 94

Chromospheric Mg II Emission in A5 to K5 Main Sequence Stars from High Resolution IUE Spectra

Blanco, C., Bruca, L., Catalano, S., Marilli, E. **115**, 280

The relationship between soft X-rays and the 1640 Å feature fluxes in late-type stars

Rego, M., Gonzalez-Riestra, R., Fernandez-Figueroa, M.J. **119**, 227

The Mg II h and k lines in Vega

Freire Ferrero, R., Gouttebroze, P., Kondo, Y. **121**, 59

The spectra of late type dwarfs and sub-dwarfs in the near ultraviolet. II. Limits to variability in Mg II emission from IUE spectrophotometry

Crivellari, L., Franco, M.L., Molaro, P., Vladilo, G., Beckman, J.E. **121**, 164; **52**, 135

Ca II chromospheric emission and rotation of main sequence stars

Catalano, S., Marilli, E. **121**, 190

Photometry of the post T Tauri star HD 36705

Rucinski, S.M. **121**, 330; **52**, 281

The Ca II K emission from the Sun as a star. I. Observational parameters

Oranje, B.J. **122**, 88

Ultraviolet observations of AR Lacertae

Kızıloğlu, Ü., Derman, E., Ögelman, H., Tokdemir, F. **123**, 17

Evidence of high chromospheric activity in Hyades dwarfs from spectroscopic observations

Cayrel, R., Cayrel de Strobel, G., Campbell, B., Mein, N., Mein, P., Dumont, S. **123**, 89

Detection of a stellar prominence of the K supergiant 32 Cyg

Schröder, K.-P. **124**, L16

The Ca II K emission from the Sun as a star. II. The plage emission profile

Oranje, B.J. **124**, 43

Period-activity relations in close binaries

Vilhu, O., Rucinski, S.M. **127**, 5

Ca II K emission diagnostics. I. The widths and the strengths in a one-dimensional model

Marmolino, C., Severino, G. **127**, 33

Coronal activity in F-, G-, and K-type stars. I. Relations between parameters characterizing stellar structure and activity

Schrijver, C.J. **127**, 289

The Herbig Ae star AB Aur: absorption along the line of sight and chromospheric emission

Felenbok, P., Praderie, F., Talavera, A. **128**, 74

The D₃ 5876 Å line in main sequence stars: a search for rotational modulation in ϵ Eri and κ Cet

Lambert, D.L., O'Brien, G.T. **128**, 110

A possible explanation of the Wilson-Bappu relation and the chromospheric temperature rise in late-type stars

Kneer, F. **128**, 311

Stellar Content

Surface Photometry of Edge-on Spiral Galaxies. I. A Model for the Three-dimensional Distribution of Light in Galactic Disks

van der Kruit, P.C., Searle, L. **95**, 105

Surface Photometry of Edge-on Spiral Galaxies. II. The Distribution of Light and Colour in the Disk and Spheroid of NGC 891

van der Kruit, P.C., Searle, L. **95**, 116

Stellar Coronae

On the Energy Balance of Stellar Coronae

Endler, F., Hammer, R., Ulmschneider, P. **73**, 190

Line Driven Sound Waves in Early Type Stars

Martens, P.C.H. **75**, L7

On the Two Parameter Models for Stellar Coronae

Mangeney, A., Souffrin, P. **78**, 36

Minimum-flux Coronal Models for Hydrogen and Helium White Dwarf Atmospheres

Lampton, M., Mewe, R. **78**, 104

The Minimum Flux Corona Theory

Hearn, A.G. **79**, L1

The Ultraviolet High-resolution Spectrum of Feige 86

Hack, M. **81**, L1

Point Source Contributions to the Extreme Ultraviolet Background

Stern, R., Bowyer, S. **83**, L1

The Basic Structure of Hot White Dwarfs Atmospheres as a Function of Composition

Böhm, K.H., Kapranidis, S. **87**, 307

Stellar X-ray Emission as a Consequence of Magnetic Activity

Belvedere, G., Chiuderi, C., Paternò, L. **96**, 369

Models for Stellar Coronae. Numerical Methods and Examples

Hearn, A.G., Vardavas, I.M. **98**, 230

Models for Stellar Coronae. Comparison with the Minimum Flux Corona Theory

Vardavas, I.M., Hearn, A.G. **98**, 241

Models for Stellar Coronae. Differences Between Hydrostatic and Dynamic Models

Hearn, A.G., Vardavas, I.M. **98**, 246

Comments on the Acoustic Heating of Stellar Coronae

Ulmschneider, P., Bohn, H.U. **99**, 173

An Analytical Model for Stellar Coronae

Martens, P.C.H. **102**, 156

Analysis of the Far Ultraviolet Emission Lines in Late Type Stars de Castro, E., Fernández-Figueroa, M.J., Rego, M., Ponz, D.

102, 207

Stellar Dynamo and the Galactic X-ray Sources

Belvedere, G., Molteni, D. **102**, 283

Coronal Loops in the Sun and in the Stars

Landini, M., Monsignori Fossi, B.C. **102**, 391

On the Absence of Coronal Line Emission from Orion Population Stars

Gahn, G.F., Krautter, J. **106**, 25

Detection of Further Red Giants with "Hybrid" Atmospheres and a Possible Correlation with Double Circumstellar Mg II and Ca II Lines

Reimers, D. **107**, 292

On the Theory of Shock-heated Atmospheres. III. Discussion of the Formalism and Application to Stellar Coronae

Souffrin, P. **109**, 205

Magnetic Structure in Cool Stars. V. Chromospheric and Transition-region Emission from Giants

Oranje, B.J., Zwaan, C., Middelkoop, F. **110**, 30

The Outer Atmosphere Structure of Three Late Type Stars

de Castro, E., Fernández-Figueroa, M.J., Rego, M. **113**, 94

Models for Stellar Coronae: The Effects of Coronal Heating with Long Dissipation Scale Lengths

Hearn, A.G. **116**, 296

Emissions from the transition regions and coronae of three cool dwarf stars

Fernández-Figueroa, M.J., de Castro, E., Rego, M. **119**, 243

Stellar coronae: What can be predicted with minimum flux models?

Hammer, R., Endler, F., Ulmschneider, P. **120**, 141

Coronae and winds in evolving stars

Robbrecht, W., de Loore, C., Olson, G. **121**, 286

Relaxation oscillations and double temperature structures in stellar coronae

Hearn, A.G., Kuin, N.P.M., Martens, P.C.H. **125**, 69

Period-activity relations in close binaries

Vilhu, O., Rucinski, S.M. **127**, 5

Coronal activity in F-, G-, and K-type stars. I. Relations between parameters characterizing stellar structure and activity

Schrijver, C.J. **127**, 289

Stellar Diameters, see also Eclipsing Binaries, Peculiar A Stars

Radii of Single Main Sequence Stars (AOV-G2V) Comparison with Radii Determined Using Binary Systems

Shallis, M.J., Blackwell, D.E. **81**, 336

Use of the Infra-red Flux Method for Determining Stellar Effective Temperatures and Angular Diameters; the Stellar Temperature Scale

Blackwell, D.E., Petford, A.D., Shallis, M.J. **82**, 249

Radial Velocity Curve, and Radius of the Pulsating Star FG Sge

Mayor, M., Acker, A. **92**, 1

An Improvement of the Baade-Wesselink Method to Determine the Mean Radius of Pulsating Variables

Caccin, B., Onnembo, A., Russo, G., Sollazzo, C. **97**, 104

Cepheid Radii and Masses by Means of VBLUW Photometry

Sollazzo, C., Russo, G., Onnembo, A., Caccin, B. **99**, 66

Preliminary Comments on the Catalogue of Apparent Diameters and Absolute Radii of Stars (Cadars)

Fracassini, M., Manzolini, F., Pasinetti, L.E. **99**, 203; **44**, 55

Catalogue of Apparent Diameters and Absolute Radii of Stars (CADARS)

Fracassini, M., Pasinetti, L.E., Manzolini, F. **101**, 420; **45**, 145

On the Possibility of Detecting Companions to Cepheids and Their Effect on the CORS Method

Russo, G., Sollazzo, C., Coppola, M. **102**, 20

Stellar Diameter Measurements by Two-telescope Interferometry in Optical Wavelengths

Bonneau, D., Koechlin, L., Oneto, J.L., Vakili, F. **103**, 28

Effective Temperatures, and Radii of Luminous O and B Stars: A Test for the Accuracy of the Model Atmospheres

Remie, H., Lamers, H.J.G.L.M. **105**, 85

On the Radius Determination of the Variable F-type Supergiant BL Tel(F)

van Genderen, A.M. **105**, 250

The Diameter of Mira

Bonneau, D., Foy, R., Blazit, A., Labeyrie, A. **106**, 235

Some Remarks on the Spectra of X-ray Bursts

van Paradijs, J. **107**, 51

A List of Stars with Large Expected Angular Diameters

Ochsenbein, F., Halbwachs, J.L. **107**, 414; **47**, 523

The Angular Diameter of Betelgeuse

Balega, Y., Blazit, A., Bonneau, D., Koechlin, L., Foy, R., Labeyrie, A. **115**, 253

Estimated Absolute Dimensions and the Inferred Lifetime and Angular Momentum of W Ursae Majoris Contact Binaries

Van Hamme, W. **116**, 27

One-dimensional high resolution image reconstruction on Eta Carinae at 4.6 μ m with speckle data

Chelli, A., Perrier, C., Biraud, Y.G. **117**, 199

Spectroscopic observations of eclipsing binaries. V. Accurate mass determination for the B-type systems V539 Arae and ζ Phoenicis

Andersen, J. **118**, 255

Stellar interferometry: diameters and effective temperatures of five giant stars (Text in French)

Faucherre, M., Bonneau, D., Koechlin, L., Vakili, F. **120**, 263

Absolute dimensions of eclipsing binaries. I. The early-type detached system QX Carinae

Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **121**, 271

Determination of radii of cepheids. II. Radial velocities and dimensions of AD Gem

Imbert, M. **124**, 153; **53**, 85

Absolute dimensions of eclipsing binaries. II. The early-type semidetached system V Puppis

Andersen, J., Clausen, J.V., Giménez, A., Nordström, B. **128**, 17

Stellar Dynamics and Kinematics, see also Gamma Ray Radiation

Inner Lindblad Resonance in Galaxies. Nonlinear Theory. III. The Response Density

Contopoulos, G. **71**, 221

Dynamical Friction in the Galactic Disk

Keenan, D.W. **71**, 245

Demonstration of the Response to Spiral Density Waves by Investigation of Individual Stellar Orbits in Galaxies

Frahm, R., Fuchs, B., Thielheim, K.O. **72**, 263

Evolutionary Structure of Large Stars Clusters

Angeletti, L., Giannone, P. **74**, 57

A Comment on the Kinematical Trend of Velocity Residuals

Peralta, J.O., Peralta, M.T. **74**, 121

The Density Response of a Typical Disc Stellar Population to a Spiral Perturbation near the Corotation Resonance

Mennessier, M.O., Martinet, L. **75**, 276

Angular Motion of Trapped Stars near the Corotation Circle in Spiral Galaxies

Colin, J. **76**, 356

Are Massive Galactic Haloes Necessary to Prevent Rapid, Global Bar Formation?

Berman, R.H., Mark, J.W.-K. **77**, 31

Orbits near the Particle Resonance of a Galaxy. I. Numerical Study

Papayannopoulos, T. **77**, 75

Erratum: The Density Response of a Typical Disc Stellar Population to a Spiral Perturbation near the Corotation Resonance

Mennessier, M.O., Martinet, L. **77**, 370

Time Dependent Solution for a Self-gravitating Star System

Munier, A., Feix, M., Fijalkow, E., Burgan, J.R., Gutierrez, J. **78**, 65

Applications to Stellar Dynamics of a One-parameter Family of Triple Close Approaches

Szebehely, V. **78**, 349

Scale-covariant Stellar Dynamics

Bouvier, P., Maeder, A. **79**, 158

Orbits near the Particle Resonance of a Galaxy. II. Theoretical Study

Papayannopoulos, T. **79**, 197

How Far Do Bars Extend?

Contopoulos, G. **81**, 198

The Force-field Normal to the Galactic Plane

House, F., Kilkenny, D. **81**, 251

The Stability of Rotating Spheroidal Stellar Systems

Wiegandt, R. **82**, 177

Emden Sphere Embedded in a Background

Salvador-Solé, E., Gerbal, D. **83**, 95

Dynamical Evolution of Cluster Models with a Continuous Stellar Mass Loss

Angeletti, L., Giannone, P. **85**, 113

Superclusters and the Secondary Maximum in the Cluster Density Profile. II.

Gerbal, D., Salvador-Solé, E. **87**, 165

Nonlinear Effects Near the Particle Resonance

Palous, J. **87**, 361

Bar-driven Spiral Structure

Athanassoula, E. **88**, 184

Galaxy Models with Live Halos

Sellwood, J.A. **89**, 296

Orbits near a 2/3 Resonance

Michaelidis, P. **91**, 165

Orbits in Weak and Strong Bars

Contopoulos, G., Papayannopoulos, Th. **92**, 33

The Possible Nature of the High-velocity OB Stars: Hot UV-bright Stars in the Galactic Disk

Carrasco, L., Bisiacchi, G.F., Cruz-González, C., Firmani, C., Costero, R. **92**, 253

A Systematic Search at 1612 MHz for OH Maser Sources. III. The Galactic Distribution, Kinematics, and Emission Properties of Type II OH/IR Sources

Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **95**, 156

Galactical Tidal Limits on Star Clusters. I. Stability of Stellar Orbits and the Zero Velocity Surfaces

Keenan, D.W. **95**, 334

Galactic Tidal Limits on Star Clusters. II. Tidal Radius and Outer Dynamical Structure

Keenan, D.W. **95**, 340

Vitesse radiales de 713 étoiles appartenant à 4 champs de $4^\circ \times 4^\circ$, mesurées au prisme objectif de 620 mm de l'Observatoire de Haute-Provence

Fehrenbach, Ch., Burnage, R. **95**, 396; **43**, 296

Invariant Surfaces and Orbital Behaviour in Dynamical Systems with 3 Degrees of Freedom

Martinet, L., Magnenat, P. **96**, 68

Formation and Properties of Persisting Stellar Bars

Combes, F., Sanders, R.H. **96**, 164

A Kinematical Model of Asymmetric Galaxies. Application to M 33

Colin, J., Athanassoula, E. **97**, 63

Metal Enrichment in the Atmospheres of Extremely Metal-deficient Dwarf Stars by Accretion of Interstellar Matter

Yoshii, Y. **97**, 280

Kinematics of Stars and Interstellar Gas Along the Inner Side of the Carina Spiral Feature

Ardeberg, A., Maurice, E. **98**, 9

Systematic Motions of Fundamental Stars

Brosche, P., Schwan, H. **99**, 311

Bar Instability and Rotation Curves

Sellwood, J.A. **99**, 362

Kinematical and Chemical Evolution of the Galactic Disk near the Sun

Vader, J.P., de Jong, T. **100**, 124

The Density Response of a Stellar Disk to Growing Oval Mass Distributions. The Exponential Mass Model in First Order Epicyclic Approximation

Polzin, D., Thielheim, K.O. **101**, 409

A "Symmetrical" Kinematical Model for Elliptical Galaxies. Application to the Edge on Bulge of M 31

Monnet, G., Rosado, M. **102**, 175

The Effects of Resonances near Corotation in Barred Galaxies

Contopoulos, G. **102**, 265

Pulsar Altitude Distribution as a Clue to Their Mean Velocity and Lifetime

Arnaud, M., Rothenflug, R. **103**, 263

Erratum: Systematic Motions of Fundamental Stars

Brosche, P., Schwan, H. **103**, 427

Inner Lindblad Resonance in Galaxies. Nonlinear Theory. IV. Self-Consistent Bars

Contopoulos, G. **104**, 116

Kinematics and Dynamics of the Barred Spiral Galaxy NGC 1313

Marcelin, M., Athanassoula, E. **105**, 76

On the Evidence of a Massive Galactic Corona

Rohlf, K. **105**, 296

- The Equilibrium and Bifurcation of Rotating Stellar Systems
Wiegandt, R. **105**, 326
- Studies of Nearly Face-on Spiral Galaxies. I. The Velocity Dispersion of the H I Gas in NGC 3938
van der Kruit, P.C., Shostak, G.S. **105**, 351
- The Stability of Inhomogeneous Axisymmetric Stellar Systems
Wiegandt, R. **106**, 240
- Excitation of Warps in Galaxies: Fluid Model of Disk-halo Interaction
Bertin, G., Casertano, S. **106**, 274
- Revised Photometric Elements of the Eclipsing Binary EE Aquarii
Russo, G., Sollazzo, C. **107**, 197
- Periodic Orbits in Triaxial Galactic Models
Magenat, P. **108**, 89
- Plane Galactic Orbits in Stationary and Time-dependent Rotating Bars
Spreckels, H., Thielheim, K.O. **108**, 206
- Density Wave Theory for Spiral Galaxies: Effects of Resonant Stars at Corotation
Bertin, G., Haass, J. **108**, 265
- High Order Momenta of the Local Stellar Velocity Distribution
Núñez, J., Torra, J. **110**, 95
- The Phase-space Distribution Function of Galaxies in Clusters and the Secondary Peak
Trevese, D., Vignato, A. **110**, 238
- Dissipative Evolution of Collisionless Stellar Systems. II. Influence of Binaries on the Evolution of Globular Clusters and Galactic Nuclei
Dokuchaev, V.I., Ozernoy, L.M. **111**, 16
- On the Disk Thickness of Spiral Galaxies
Rohlf, K., Wiemer, H.-J. **112**, 116
- Radial Velocities of 617 Stars Belonging to Four Stellar Fields of $4^\circ \times 4^\circ$ (Text in French)
Fehrenbach, C., Burnage, R. **112**, 178; **49**, 483
- An Odd Behavior of Nearby Stars Velocity Components in the Direction $l = 330^\circ$ $b = 0^\circ$
Menge de Freitas, S. **112**, 395; **49**, 687
- The Distribution of Stars Around a Black Hole: Numerical Solution of the Kinetic Equation with Collisions
Bisnovatyi-Kogan, G.S., Churayev, R.S., Kolosov, B.I. **113**, 179
- Vlasov Equation?
Hénon, M. **114**, 211
- Periodic Orbits in Nearly Axisymmetric Stellar Systems
Caranicas, N., Barbanis, B. **114**, 360
- Lifetime of Spurs in Galaxies
Feitzinger, J.V., Schwerdtfeger, H. **116**, 117
- Dynamical friction on extended objects
Mulder, W.A. **117**, 9
- Ordered and ergodic motions of stars in galaxies
Contopoulos, G. **117**, 89
- On the methods for determining galaxy velocity dispersions
Larsen, N., Norgaard-Nielsen, H.U., Kjaergaard, P., Dickens, R.J. **117**, 257
- Kinematical studies of open clusters and OB-associations from relative radial velocity observations. II. The Orion Belt region
Gieseke, F. **118**, 102
- On the nature of orbits in realistic bar potentials
Papayannopoulos, T., Petrou, M. **119**, 21
- Velocity fluctuations in the interstellar medium due to the gravitational interaction with the system of stars
Kegel, W.H., Völk, H.J. **119**, 101
- The formation of disc galaxies
Jones, B.J.T., Wyse, R.F.G. **120**, 165
- Roche's limit in a galaxy. II. The effects of rotation
Robe, H. **120**, 215
- Periodic orbits and warps
Mulder, W.A. **121**, 91
- Stability of star clusters as galactic satellites. I. Motion in the cluster orbital plane
Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **121**, 183
- Stability of star clusters as galactic satellites. II. Motion perpendicular to the cluster orbital plane
Angeletti, L., Giannone, P. **121**, 188
- Photometry, kinematics, and dynamics of the barred spiral galaxy NGC 5383
Duval, M.F., Athanassoula, E. **121**, 297
- Periodic orbits in a three-dimensional potential (Text in French)
Hayli, A., Desoigneux, N., Galletta, G. **122**, 137
- Bulge-halo effects in barred galaxies
Terzides, C., Michalodimitrakis, M. **122**, 231
- The distribution of violently relaxed matter in galaxies
Rephaeli, Y. **123**, 98
- The gradients of the velocity ellipsoid for nearby stars
Oblak, E. **123**, 238
- Periodic orbits in elliptical galaxies
Davoust, E. **125**, 101
- The hydrodynamic motions of OB stars
Quiroga, R.J., Tarsia, R. **127**, 245
- Orbits as building blocks of a barred galaxy model
Athanassoula, E., Bienaymé, O., Martinet, L., Pfenniger, D. **127**, 349
- Stellar Envelopes**, see Be Stars, Circumstellar Matter, Shell Stars
- Observations of the Brightness Structure of α Orionis
Ricort, G., Aime, A., Vernin, J., Kadiri, S. **99**, 232
- Stellar Evolution**, see also Star Formation, Stellar Structure
- The Influence of the Age of the Universe on the Stellar Evolution with Variable G
Vaiopoulos, D.A., Laskarides, P.G. **71**, L12
- The Evolution of a Fast Nova Model with a $Z = 0.03$ Envelope from Pre-explosion to Decline
Prialnik, D., Shara, M.M., Shaviv, G. **72**, 192
- Dirty Solar Models
Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **73**, 121
- Massive Stars: Evolution with Mass-loss. II. Mass Loss in Early Phases, and Evolution Status of the Transition Wolf Rayet Stars
Chiosi, C., Nasi, E., Bertelli, G. **74**, 62
- Collapsing Stellar Cores and Supernovae
Epstein, R.I., Noorgaard, H., Bond, J.R. **74**, 353
- Are there Two Classes of T Tauri Stars?
Mundt, R., Bastian, U. **75**, L14
- Tables of Theoretical Isochrones for Globular Clusters
Bertelli, G., Bolton, A., Chiosi, C., Nasi, E. **75**, 261; **36**, 429
- Implications of the Barium Abundance in Metal Rich Ba II Stars
Rocca-Volmerange, R., Audouze, J. **75**, 371
- The Intrinsically Bright Wolf-Rayet Stars of Type WN 7. IV. The Galactic WN 7/WN 8 Stars as Massive O-Stars in Advanced Stages of Evolution
Moffat, A.F.J., Seggewiss, W. **77**, 128
- Turbulent Diffusion in Stars and the ($^{12}\text{C}/^{13}\text{C}$) Abundance Ratio
Genova, F., Schatzman, E. **78**, 323
- Asymptotic Giant Branch Evolution with Steady Mass Loss
Schönberner, D. **79**, 108
- Erratum: Dirty Solar Models
Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **79**, 260

- Stochastic Stellar Evolution. II. Fluctuations Due to Convection
Bertelli, G., Chiosi, C., Perdang, P. **79**, 261
- The Effect of Mass Loss on the Chemical Yields from Massive Stars
Chiosi, C., Caimmi, R. **80**, 234
- Evolution of Massive He Burning Stars Losing Mass by Stellar Wind. An Application to WR Binaries
Vanbeveren, D., Packett, W. **80**, 242
- The Effect of Mass Loss by Stellar Wind on the Chemical Enrichment of the Galaxy
Chiosi, C. **80**, 252
- The Angular Momentum Controlled Evolution of Solar Type Contact
Van't Veer, F. **80**, 287
- The Evolution of Protostellar Envelopes of Masses $3 M_{10}$ and $10 M_{10}$. I. Structure and Hydrodynamic Evolution
Yorke, H.W. **80**, 308
- The Effects of Binary Evolution on the Production of Heavy Elements in Massive Stars
Vanbeveren, D., Olson, G.L. **81**, 228
- Dimensions and Evolutionary State of the Early-type Contact Binary V701 Scorpii
Andersen, J., Nordström, B., Wilson, R.E. **82**, 225
- Symbiotic Stars - Evolutionary Considerations
Paczynski, B., Rudak, B. **82**, 349
- The Effect of Stellar Evolution on the Synchronous Rotation of Components of Massive Close Binaries
Sutantyo, W., De Grève, J.P., de Loore, C. **83**, 252
- Studies in Stellar Evolution. II. Age and Mass Calibrations for Hydrogen Burning Evolutionary Stages
Hejlesen, P.M. **83**, 384; **39**, 347
- Studies in Stellar Evolution I. The Calculation Programme and the Standard Solar Model
Hejlesen, P.M. **84**, 135
- The Unique Spectrum of SS 433, a Star Inside a Supernova Remnant
Mammano, A., Ciatti, F., Vittone, A. **85**, 14
- Evolution of a Blue Supergiant with a Neutron Star Companion Immersed in Its Envelope
Delgado, A.J. **87**, 343
- IUE and Ground Based Observations of the LMC Star S Doradus
Wolf, B., Appenzeller, I., Cassatella, A. **88**, 15
- The Relationship between the Envelope Composition of a 6 M_{\odot} Red-giant Model and its Future Evolution
Prialnik, D., Shaviv, G. **88**, 127
- On the Binary Frequency Distribution and Evolution of Wolf-Rayet Stars
Vanbeveren, D., Conti, P.S. **88**, 230
- The Effect of Mass Loss on the Age-determination of Young Clusters, with an Application to the Orion OB-Association
Paerels, F.B.S., Lamers, H.J.G.L.M., de Loore, C. **90**, 204
- The Most Massive Stars in the Galaxy and the LMC: Quasi-homogeneous Evolution, Time-averaged Mass Loss Rates and Mass Limits
Maeder, A. **92**, 101
- CH Subgiants and the Mixing Hypothesis
Smith, J.A., Demarque, P. **92**, 163
- Duplicity in the Solar Neighborhood. I. A new Spectroscopic Orbit for BY Draconis
Lucke, P.B., Mayor, M. **92**, 182
- Surface Composition Changes in Massive Star Evolution with Mass Loss
Noels, A., Conti, P.S., Gabriel, M., Vreux, J.M. **92**, 242
- The Extent of Mixing in Stellar Interiors: Evolutionary Models and Tests Based on the HR Diagrams of 34 Open Clusters
Maeder, A., Mermilliod, J.C. **93**, 136
- Evolution of 1.2 M_{\odot} Star and the Formation of Planetary Nebulae
Harpaz, A., Kovetz, A. **93**, 200
- On the Stability and Evolution of Evolved Contact Binaries
Refsdal, S., Stabell, R. **93**, 297
- Near Infrared Photometry and OH Observations of Mira Variables. Implications for Stellar Evolution
Mennessier, M.O. **93**, 325
- Advanced Evolutionary Stages of Intermediate-mass Stars. I. Evolution of Surface Compositions
Renzini, A., Voli, M. **94**, 175
- A Kinematical Analysis of SS 433 after Two Observing Seasons, 1978-79
Ciatti, F., Mammano, A., Vittone, A. **94**, 251
- Evolution of Massive Stars with Low Metal Abundance Holding for the Magellanic Clouds
Hellings, P., Vanbeveren, D. **95**, 14
- The Central Star of a Planetary Nebula
Kovetz, A., Harpaz, A. **95**, 66
- The Fluctuation Theory of Mass Loss: Application to the Evolution of Massive Stars
Andriesse, C.D., Packet, W., de Loore, C. **95**, 202
- The Mass and Mass Ratio Distribution of Massive O Type Single Stars and Binaries
Vanbeveren, D. **95**, 321
- Stellar Evolution with Turbulent Diffusion Mixing. III. The Solar Model and the Neutrino Problem
Schatzman, E., Maeder, A., Angrand, F., Glowinski, R. **96**, 1
- Discovery of a Stellar Object with Surrounding Nebulosity
Vogt, N., Wamsteker, W., Breysacher, J., Schuster, H.-E. **96**, 120
- Mass Transfer in a Binary System: The Evolution of the Mass-giving Helium Star
Delgado, A.J., Thomas, H.-C. **96**, 142
- Possible Association of a WC-OVI Star with an Active Site of Star Formation
Pitault, A. **97**, L5
- Comparative Studies of Young Open Clusters. III. Empirical Isochronous Curves and the Zero Age Main Sequence
Mermilliod, J.C. **97**, 235
- A Fine Analysis of the Extreme Helium-rich Star HD 168476
Walker, H.J., Schönberner, D. **97**, 291
- Theoretical Luminosity Functions of Red and Black Dwarfs
Staller, R.F.A., de Jong, T. **98**, 140
- The Initial Mass Ratio of Solar Type Contact Binaries
van't Veer, F. **98**, 213
- Study of Compact Planetary Nebulae. II. Temperatures, Luminosities and Problems of Evolution of the Central Stars
Martin, W. **98**, 328
- The Upper Luminosity Boundary of O Stars
Chiosi, C., Greggio, L. **98**, 336
- A Generalization of the Henyey and Integration Methods for Computing Stellar Evolution
Wilson, R.E. **99**, 43
- The Most Massive Stars Evolving to Red Supergiants: Evolution with Mass Loss, WR Stars as Post-red Supergiants and Pre-supernovae
Maeder, A. **99**, 97
- Evolution of Massive Stars with Mass Loss and Formation of WR Stars
Noels, A., Gabriel, M. **101**, 215

- The Yields in Helium and Heavy Elements and Constraints on the Past Star Formation Rate
Maeder, A. **101**, 385
- Evolution of W UMa Systems and Angular Momentum Loss
Rahunen, T. **102**, 81
- The Gravo-thermal Catastrophe and Stellar Evolution
Barbaro, G., Bertelli, G., Perdang, J., Pigatto, L. **102**, 109
- On the Core Mass Luminosity Relation
Kippenhahn, R. **102**, 293
- Grids of Evolutionary Models for the Upper Part of the HR Diagram. Mass Loss and the Turning of Some Red Supergiants into WR Stars
Maeder, A. **102**, 401
- Late Stages of Stellar Evolution: Central Stars of Planetary Nebulae
Schönberner, D. **103**, 119
- An Upper Limit for the Deuterium Abundance in Canopus
Peimbert, M., Wallerstein, G., Pilachowsky, C.A. **104**, 72
- The Helium to Heavy Element Enrichment Ratio, $\Delta Y/\Delta Z$
Chiosi, C., Matteucci, F. **105**, 140
- Evolutionary Scenarios Leading Massive Stars to WR Stars: Their Mutual Importance; the Role of Mixing
Maeder, A. **105**, 149
- On the Evolutionary Scenario of Massive Close Binaries with Primary Masses Between 20 M_{\odot} and 160 M_{\odot}
Vanbeveren, D. **105**, 260
- On the Evolutionary State of the W Ursae Majoris Contact Binaries
Van Hamme, W. **105**, 389
- Vibrational Instability of a 3000 M_{\odot} Star and the R 136 a Problem
Ledoux, P., Noels, A., Boury, A. **108**, 49
- The Evolution of a 1 M_{\odot} Helium Star
Law, W.-Y. **108**, 118
- Comparisons of the HR Diagrams of the Youngest Clusters in the Galaxy, the LMC and SMC. Evidence for a Large MS Widening
Meylan, G., Maeder, A. **108**, 148
- Detached \rightarrow Contact Scenario for the Origin of WUMa Stars
Vilhu, O. **109**, 17
- Stellar Content of Young Open Clusters. II. Be Stars
Mermilliod, J.-C. **109**, 48
- On the Stability and Evolution of Contact Binaries. I
Rahunen, T. **109**, 66
- uvby* Photometry of Visual Double Stars: A Comparison With Stellar Models and Isochrones
Olsen, E.H. **110**, 215
- A Search for Ap Stars in the Scorpio-Centaurus Association: Additional Evidence for a Slow Metal Enrichment
Borra, E.F., Joncas, G., Wizinowich, P. **111**, 117
- The Influence of CN Abundances on the Evolution of Main Sequence of Low-mass Stars
Bazzano, A., Caputo, F., Sestili, M., Castellani, V. **111**, 312
- The Hot Component of KS Persei (HD 30353)
Drilling, J.S., Schönberner, D. **113**, L22
- The Theoretical Expected Galactic Distribution of WR Runaway Stars
Vanbeveren, D. **113**, 205
- Evolution of Low Mass Stars Through Mass Loss: Transition from the Main Sequence to the Degenerate Phase
D'Antona, F., Mazzitelli, I. **113**, 303
- The Binary System Sirius in the Context of Stellar Evolution
D'Antona, F. **114**, 289
- Maeder, A., Lequeux, J.* **114**, 409
- Evolution of Low Mass Zero Metal Giants up to the Helium Flash
D'Antona, F., Mazzitelli, I. **115**, L1
- Carbon, Nitrogen and Oxygen Abundances in G8-K3 Giant Stars
Kjaergaard, P., Gustafsson, B., Walker, G.A.H., Hultqvist, L. **115**, 145
- The Combined Effect of Mass Loss and Overshooting. I. The Evolution of 35 M_{\odot} to 100 M_{\odot} Stars During Core Hydrogen Burning
Doom, C. **116**, 303
- The Combined Effect of Mass Loss and Overshooting. II. The Evolution of 10 M_{\odot} to 30 M_{\odot} Stars During Core Hydrogen Burning
Doom, C. **116**, 308
- Spectroscopic Identification of White Dwarfs in Galactic Clusters. II. NGC 2516
Reimers, D., Koester, D. **116**, 341
- Solid white dwarfs, neutron stars and type I supernovae
Labay, J., Canal, R., Isern, J. **117**, L1
- On the stability and evolution of contact binaries. II
Rahunen, T. **117**, 235
- The frequency of Be stars
Jaschek, C., Jaschek, M. **117**, 357
- Spectral fine analysis of the extreme helium star BD +10°2179
Heber, U. **118**, 39
- The z-distribution of Am stars
Ochsenbein, F. **118**, 197
- Evolution of a Population III star of low mass
Guenther, D.B., Demarque, P. **118**, 262
- Evolution of very low-mass stars
van der Linden, T., Staller, R. **118**, 285
- Status of evolution of F, G, and K field stars contained in the [Fe/H] catalogue
Cayrel de Strobel, G., Bentolila, C. **119**, 1
- Evolution of massive pregalactic stars. I. Hydrogen and helium burning
El Eid, M.F., Fricke, K.J., Ober, W.W. **119**, 54
- Evolution of massive pregalactic stars. II. Nucleosynthesis in pair creation supernovae and pregalactic enrichment
Ober, W.W., El Eid, M.F., Fricke, K.J. **119**, 61
- Short-period components in the relativistic radial velocities of SS 433 = V 1343 Aql
Mammamo, A., Margoni, R., Ciatti, F., Cristiani, S. **119**, 153
- Mass function for massive stars
Bisacchi, G.F., Firmani, C., Sarmiento, A.F. **119**, 167
- The period distribution of eclipsing binary systems
Giuricin, G., Mardirossian, F., Mezzetti, M. **119**, 218
- The influence of overshooting on the evolution of massive close binaries
Vanbeveren, D. **119**, 239
- The combined effect of mass loss and overshooting. III. Evolutionary scenarios for massive close binaries
Doom, C., de Grève, J.P. **120**, 97
- Evolution of chemical abundances in massive stars. I. OB stars, Hubble-Sandage variables and Wolf-Rayet stars. Changes at stellar surface and galactic enrichment by stellar winds
Maeder, A. **120**, 113
- Erratum: Evolution of Low Mass Zero Metal Stars up to the Helium Flash
D'Antona, F., Mazzitelli, I. **120**, 164

final mass relation for low and intermediate mass stars

Weidemann, V., Koester, D. **121**, 77

Delta Scuti variables. I. Theoretical evolution sequences for standard models and models with two-zone envelopes

Andreasen, G.K., Hejlesen, P.M., Petersen, J.O. **121**, 241

Delta Scuti variables. II. Comparisons of theoretical evolution sequences with observational data

Andreasen, G.K. **121**, 250

Absolute dimensions of eclipsing binaries. I. The early-type detached system QX Carinae

Andersen, J., Clausen, J.V., Nordström, B., Reipurth, B. **121**, 271

Freezing of a carbon-oxygen white dwarf

Mochkovitch, R. **122**, 212

Nitrogen and oxygen as indicators of primordial enrichment

Barbuy, B. **123**, 1

The formation of massive white dwarfs in cataclysmic binaries

Law, W.Y., Ritter, H. **123**, 33

Nutation-like effects in SS 433

Ciatti, F., Mammano, A., Iijima, T., Vittone, A. **123**, 360; **52**, 443

Theoretical evolution of massive stellar aggregates

Vanbeveren, D. **124**, 71

The populations of massive stars in the Galaxy: their frequency gradients in relation to metallicity and initial mass function

Meylan, G., Maeder, A. **124**, 84

Correlations and periodicities of equivalent widths in SS 433

Vittone, A., Rusconi, L., Sedmak, G., Mammano, A., Ciatti, F. **124**, 154; **53**, 109

Stellar deuterium abundance: a new upper limit in Canopus

Ferlet, R., Dennefeld, M., Spite, M. **124**, 172

Stellar activity and the period gap in cataclysmic variables

Spruit, H.C., Ritter, H. **124**, 267

BD Pavonis: a unique cataclysmic variable

Barwig, H., Schoembs, R. **124**, 287

Comments on the solar neutrino problem

Opher, R. **125**, L9

The multiple system β Sco and the age of the Upper Scorpius complex

Giannuzzi, M.A. **125**, 302

Planetary nebulae with massive nuclei. I. Time-dependent photoionization models

Tylenda, R. **126**, 299

Stellar evolution of globular cluster giants in which the external layers are CNO-enriched

Chieffi, A., D'Antona, F. **126**, 372

A list of candidates for high-velocity Ap stars

Jaschek, C., Jaschek, M., Gómez, A., Grenier, J.S. **127**, 1

On the evolution to red giants

Weiss, A. **127**, 411

Absolute dimensions of eclipsing binaries. II. The early-type semidetached system V Puppis

Andersen, J., Clausen, J.V., Giménez, A., Nordström, B. **128**, 17

An upper limit to the deuterium abundance in a few halo dwarfs

Spite, M., Maillard, J.-P., Spite, F. **128**, 252

Stellar Flares, see Flare Stars

Stellar Interior, see Stellar Structure

Delta Scuti variables. I. Theoretical evolution sequences for standard models and models with two-zone envelopes

Andreasen, G.K., Hejlesen, P.M., Petersen, J.O. **121**, 241

quences with observational data

Andreasen, G.K. **121**, 250

The molecular weight barrier and angular momentum transport in radiative stellar interiors

Knobloch, E., Spruit, H.C. **125**, 59

Transport properties of neutrinos in stellar collapse. I. Bulk viscosity of collapsing stellar cores

van den Horn, L.J., van Weert, C.G. **125**, 93

Semiconvective diffusion and energy transport

Langer, N., Sugimoto, D., Fricke, K.J. **126**, 207

Stellar Masses, see also Binary Stars, Multiple Stars

Studies in Stellar Evolution. II. Age and Mass Calibrations for Hydrogen Burning Evolutionary Stages

Hejlesen, P.M. **83**, 384; **39**, 347

Revised Photometric Elements of the Detached Eclipsing Binaries RS Cha, RZ Cha, and HS Hya

Giuricin, G., Mardirossian, F., Mezzetti, M., Predolin, F. **85**, 259

Masses and Mass Loss from O and Of Stars

Lamers, H.J.G.L.M., Paerels, F.B.S., de Loore, C. **87**, 68

The Mass Distribution of Stars and the Weibull Statistical Function

Hughes, D.W. **87**, 136

Slightly Detached Binaries as Calibrators of the Main-Sequence

Wilson, R.E., Rafert, J.B. **91**, 380; **42**, 195

A Theoretical Age and Mass Calibration of the Geneva Photometric System for Early-type Stars

North, P., Cramer, N. **97**, 416; **43**, 395

Cepheid Radii and Masses by Means of VBLUW Photometry

Sollazzo, C., Russo, G., Onnembo, A., Caccin, B. **99**, 66

Chemical Composition in M 67 from Detailed Analyses

Foy, R., Proust, D. **99**, 221

Photometric Orbit of the Massive System RY Scuti

Milano, L., Vittone, A., Ciatti, F., Mammano, A., Margoni, R., Strazzulla, G. **100**, 59

A Contribution to the Determination of the Mass of Arcturus

Spite, M., Martin, P. **101**, 265

The Ellipsoidal Binary V470 Cygni

Russo, G., Milano, L., Maceroni, C. **109**, 368

Revised Photometric Data for Six Eclipsing Binaries

Giuricin, G., Mardirossian, F., Mezzetti, M. **111**, 210; **49**, 89

Revised Orbital Elements of Visual Binary Stars ADS 3182 and ADS 3483 (Text in French)

Scardia, M. **112**, 179; **49**, 503

Atmospheric Parameters and Carbon Abundance of White Dwarfs of Spectral Types C₂ and DC

Koester, D., Weidemann, V., Zeidler-K.T., E.-M. **116**, 147

Stellar Occultations, see Occultation

Stellar Radii, see Stellar Diameters

Stellar Rotation

Effects of Stellar Rotation in the near Ultraviolet Spectrum of Early Type Stars. Analysis of the Stellar Rotation Effects in the TD-1 A Satellite Observations

Llorente de Andrés, F., Morales Durán, C. **72**, 318

The Rotational Velocity Effect on the Main Sequence Am Stars Metallicity

Burkhart, C. **74**, 38

The Rotational History of a Binary X-ray Pulsar

Wang, Y.-M. **74**, 253

- A Comparison of Two Independent Calculations of the Axisymmetric Collapse of Rotating Protostar
Bodenheimer, P., Tscharnuter, W. **74**, 288
- Apparent Spectral Inconsistencies Due to the Gravity Darkening of Pole-on Rapidly-rotating B-type Stars
Kodaira, K., Hoekstra, R. **78**, 292
- The Evolution of Rotational Velocity in O Type Stars
Packet, W., Vanbeveren, D., De Grève, J.P., de Loore, C., Sreenivasan, S.R. **82**, 73
- The Effect of Stellar Evolution on the Synchronous Rotation of Components of Massive Close Binaries
Sutanyo, W., De Grève, J.P., de Loore, C. **83**, 252
- On the Initial Distribution and Evolution of Angular Momentum for Main Sequence Stars
Carrasco, L., Franco, J., Roth, M. **86**, 217
- Differential Rotation Along the Lower Main Sequence: A Theoretical Investigation
Belvedere, G., Paternò, L., Stix, M. **88**, 240
- On the Calculation of the Frequency Splitting of Adiabatic Non-radial Stellar Oscillations by Slow Differential Rotation
Cuyper, J. **89**, 207
- The Time Scale of Secularly Unstable Stellar Rotation
Kippenhahn, R., Ruschenplatt, G., Thomas, H.-C. **91**, 181
- A New Method for Determining the Rotation of Late Spectral Type Stars
Benz, W., Mayor, M. **93**, 235
- Equilibrium and Stability of Rotating Stellar Cores with Finite Entropy
Glatzel, W., Fricke, K.J., El Eid, M. **93**, 395
- Low Frequency Oscillations of a Slowly Rotating Star: Quasi-toroidal Modes
Provost, J., Berthomieu, G., Rocca, A. **94**, 126
- Indications for Rotation Modulation and Short-term Variations in the Ca II H and K Emission from Cool Main Sequence Stars
Middelkoop, F., Vaughan, A.H., Preston, G.W. **96**, 401
- Interpretation of Emission Line Profiles of Rotating Shells
Pöllitsch, G.F. **97**, 175
- Binaries in Open Clusters. II. Discrimination Between Double and Rotating Stars
Trimble, V.L., Ostriker, J.P. **97**, 403
- Effects of Stellar Rotation in the Near Ultraviolet Spectrum of Early Type Stars. The Intrinsic Reddening Effect and the Be Phenomenon
Llorente de Andrés, F., Muñoz, F., López Arroyo, M., Morales, C. **98**, 418
- Magnetic Braking in Low-mass X-ray Binaries
Verbunt, F., Zwaan, C. **100**, L7
- Magnetic Structure in Cool Stars. III. Ca II H and K Emission and Rotation of Main-sequence Stars
Middelkoop, F. **101**, 295
- On the Spin-up of the Mass Accreting Component in a Close Binary System
Packet, W. **102**, 17
- Erratum: Binaries in Open Clusters. II. Discrimination Between Double and Rotating Stars*
Trimble, V.L., Ostriker, J.P. **102**, 142
- The Effect of Differential Rotation on the Internal Structure of Low Mass Stars
Wai-Yuen, Law **102**, 178
- UBVR_I Photometry of FK Comae
Rucinski, S.M. **104**, 260
- Duplicity in the Solar Neighborhood. II. Spectroscopic Orbits for Four Bright Stars: HD 21018, HD 30021, HD 158837, and HD 190658
Lucke, P.B., Mayor, M. **105**, 318
- A Model for Constructing Artificial Integrated Spectral Lines and Their Fourier Transform Properties Relevant to the Search for Differential Rotation of Stars
Garcia-Alegre, M.C., Vázquez, M., Wöhl, H. **106**, 261
- Evidence of Variable Migration Rate and a Past Direction Reversal of the RS CVn Wave-like Distortion
Blanco, C., Catalano, S., Marilli, E., Rodonò, M. **106**, 311
- Magnetic Structure in Cool Stars. IV. Rotation and Ca II H and K Emission of Main-sequence Stars
Middelkoop, F. **107**, 31
- Active Picture of Rotation
Ando, H. **108**, 7
- Forced Oscillations in Binary Systems. Toroidal Modes
Rocca, A. **111**, 252
- Magnetic Structure in Cool Stars. VI. Ca II H and K Fluxes from Evolved Stars
Middelkoop, F. **113**, 1
- Stability of Differential Rotation in Stars
Knobloch, E., Spruit, H.C. **113**, 261
- A Note on Garcia-Alegre et al.'s Article, "A Model for Constructing Artificial Integrated Spectral Lines and Their Fourier Transform Properties Relevant to the Search for Differential Rotation of Stars"
Bruning, D.H. **115**, 203
- Shell and Photosphere of σ OriE: New Observations and Improved Model
Groote, D., Hunger, K. **116**, 64
- Determination of the time scale of the magnetic moment decay in pulsars
Nowakowski, L.A. **118**, 29
- Spectroscopic observations of eclipsing binaries. V. Accurate mass determination for the B-type systems V539 Arae and ζ Phoenicis
Andersen, J. **118**, 255
- On the stability of toroidal flux tubes in differentially rotating stars
van Ballegooijen, A.A. **118**, 275
- Models of stellar differential rotation on the lower main sequence
Moss, D., Vilhu, O. **119**, 47
- Ca II chromospheric emission and rotation of main sequence stars
Catalano, S., Marilli, E. **121**, 190
- Standardization of stellar radial velocities in the presence of stellar rotation
Andersen, J., Nordström, B. **122**, 23
- Rotation and tidal interactions in BY Draconis binaries
Edwards, D.A. **123**, 316
- The molecular weight barrier and angular momentum transport in radiative stellar interiors
Knobloch, E., Spruit, H.C. **125**, 59
- The equations that govern rotational and tidal perturbations of stellar oscillations
Smeyers, P., Martens, L. **125**, 193
- Second catalogue of H α line profiles in 55 Be star spectra
Andrillat, Y. **126**, 220; **53**, 319
- Period-activity relations in close binaries
Vilhu, O., Rucinski, S.M. **127**, 5
- The D₃ 5876 Å line in main sequence stars: a search for rotational modulation in ϵ Eri and κ Cet
Lambert, D.L., O'Brien, G.T. **128**, 110

A search for periodic variability of normal A-type stars

Engberg, M. **128**, 260; **54**, 203

Stellar content of young open clusters. III. The "sn" stars

Mermilliod, J.-C. **128**, 362

Stellar Statistics, see also Stellar Dynamics and Kinematics

Semi-theoretical Density Profiles for Late-type Giants along the Galactic Radius through the Sun

Spaenhauer, A.M., Fenkart, R.P. **71**, 274; **35**, 249

The Dependence of Statistical Results from N-Body Calculations on N

Smith, H. Jr. **76**, 192

Distribution of Stars and Interstellar Dust Along the Inner Side of the Carina Spiral Feature

Ardeberg, A., Maurice, E. **83**, 383; **39**, 325

A New Method for Deriving Space Densities of Stars

Ochsenbein, F. **86**, 321

Pulsar Statistics and Their Interpretations

Arnett, W.D., Lerche, I. **95**, 308

Microfiche Edition of CSI

Ochsenbein, F., Bischoff, M., Egret, D. **95**, 395; **43**, 259

Statistics of Planetary Nebulae

Maciel, W.J. **98**, 406

Multivariate Analysis of Some Ultrashort Period Cepheids (USPC)

Fracassini, M., Pasinetti, L.E., Antonello, E., Raffaelli, G. **99**, 397

Statistical Models for Spectroscopic and for Eclipsing Binary Stars

Halbwachs, J.L. **102**, 191

Three-colour Photometry of a Field in the Galactic Anticentre Section Near NGC 2360

Morales Durán, C. **108**, 416; **48**, 139

The z-distribution of Am stars

Ochsenbein, F. **118**, 197

An analytic solution for stellar space densities

Reed, B.C. **118**, 229

Statistics of binary stars: eclipse depths

Giuricin, G., Mardirossian, F., Mezzetti, M. **121**, 42

Density gradients for disc- and halo-stars in the direction of the globular cluster NGC 7006

Becker, W., Karaali, S. **121**, 330; **52**, 269

Binaries among the bright stars: estimation of the bias and study of the main-sequence stars

Halbwachs, J.L. **128**, 399

Stellar Structure, see also Stellar Evolution

Thermodynamic Properties and Equations of State for Hydrogen and Helium in Stellar Conditions

Magni, G., Mazzitelli, I. **72**, 134

On the Efficiency of Convection and the Possibility of Mixing at the Helium Core Flash

Scalo, J.M. **74**, 6

Stars with Given Entropy Distribution

Kähler, H. **75**, 207

On the Connection between Stellar Response Functions and the Secular Modes

Hazlehurst, J., Refsdal, S., Ritter, H. **78**, 303

Stability of the Sun Against Nonradial Thermal Modes

Saio, H., Cox, J.P., Hansen, C.J. **85**, 263

Cellular Convection in a Stratified Atmosphere

Massaguer, J.M., Zahn, J.-P. **87**, 315

Two Basis Sets for the g- and p-modes of Self Gravitating Fluids

Dixit, V.V., Sarath, B., Sobouti, Y. **89**, 259

The Time Scale of Thermohaline Mixing in Stars

Kippenhahn, R., Ruschenplatt, G., Thomas, H.-C. **91**, 175

Equilibrium and Stability of Rotating Stellar Cores with Finite Entropy

Glatzel, W., Fricke, K.J., El Eid, M. **93**, 395

Low Frequency Oscillations of a Slowly Rotating Star: Quasi-toroidal Modes

Provost, J., Berthomieu, G., Rocca, A. **94**, 126

On the Core Mass Luminosity Relation

Kippenhahn, R. **102**, 293

Vibrational Stability of First Generation Stars

Ibrahim, A., Boury, A., Noels, A. **103**, 390

Evolutionary Scenarios Leading Massive Stars to WR Stars: Their Mutual Importance; the Role of Mixing

Maeder, A. **105**, 149

Vibrational Stability and Critical Mass of He Stars

Noels, A., Masereel, C. **105**, 293

On the Modal Structure of the Solar Oscillations

Stein, R.F. **105**, 417

The Solar Neutrino Problem

Taylor, J.B., Connor, J.W. **107**, L1

Overshooting from Convective Cores and the Occurrence of Loops in the HR Diagram

Matraka, B., Wassermann, C., Weigert, A. **107**, 283

Semiconvection in Low-mass Main Sequence Stars

Crowe, R.A., Mitalas, R. **108**, 55

The Evolution of a 1 M Helium Star

Law, W.-Y. **108**, 118

Models of Stellar Evolution and Their Use in Calibrating Distances and Element Abundances of Stars

Gehren, T. **109**, 187

On Local Theories of Time-dependent Convection in the Stellar Pulsation Problem. III. The Effect of Turbulent Viscosity (Continued)

Gonczy, G. **110**, 1

The Solar Structure and the Low / Five-minute Oscillation. I

Gabriel, M., Scuflaire, R., Noels, A. **110**, 50

Non-linear Stellar Oscillations. Two-Mode Interactions

Perdang, J., Blacher, S. **112**, 35

Mean-field Calculations of the Equation of State of Supernova Matter II

Bonche, P., Vautherin, D. **112**, 268

The Overshoot Layer at the Base of the Solar Convective Zone and the Problem of Magnetic Flux Storage

van Ballegooijen, A.A. **113**, 99

The Solar Structure and the Low / Five-minute Oscillation. II

Scuflaire, R., Gabriel, M., Noels, A. **113**, 219

Stability of Differential Rotation in Stars

Knobloch, E., Spruit, H.C. **113**, 261

The Effect of Non-adiabatic Layers on the Vibrational Behaviour of Stars

Buchler, J.R., Regev, O. **114**, 188

Nuclear Forces and the Properties of Matter at High Temperature and Density

Rayet, M., Arnould, M., Tondeur, F., Paulus, G. **116**, 183

Alternate period changes in close binary systems

Mateo, J.J., Whitmire, D.P. **117**, L7

The resonance hypothesis applied to RV Tauri stars

Takeuti, M., Petersen, J.O. **117**, 352

Resonance effects in radial pulsators

Buchler, J.R. **118**, 163

How dense is the g-spectrum?

Perdang, J. **122**, 39

Non-adiabatic quasi-toroidal modes in a slowly rotating star: application to ZZ Ceti

Berthomieu, G., Provost, J. **122**, 199

Influence of the equations of state and of the Z value on the solar five-minute oscillation

Shibahashi, H., Noels, A., Gabriel, M. **123**, 283

The effects of nonlinearities on radial and nonradial oscillations

Buchler, J.R., Regev, O. **123**, 331

Hydrostatic reaction of the Sun to local disturbances

Däppen, W. **124**, 11

A new instability during nuclear shell burning

Kippenhahn, R., Thomas, H.-C. **124**, 206

Stability of thermal relaxation oscillations

Barranco, M., Buchler, J.R., Perdang, J. **125**, 6

Phase transitions in dense stars

Diaz Alonso, J. **125**, 287

Calculation of stellar structure. III. Solar models that satisfy the necessary conditions for a unique solution to the stellar structure equations

Rouse, C.A. **126**, 102

Phase transitions in stellar cores. I. Equilibrium configurations

Schaeffer, R., Haensel, P., Zdunik, L. **126**, 121

Stellar Systems, see also Clusters, Galaxies

Time Dependent Solution for a Self-gravitating Star System

Munier, A., Feix, M., Fijalkow, E., Burgan, J.R., Gutierrez, J. **78**, 65

The multiple system β Sco and the age of the Upper Scorpius complex

Giannuzzi, M.A. **125**, 302

Stellar Wind, see also Close Binaries, Early Type Stars, Mass Loss, Solar Wind, X-ray Binaries

The Ultraviolet Spectrum and Expansion Velocity of η Carinae from IUE Observations

Cassatella, A., Giangrande, A., Viotti, R. **71**, L9

Non-conservative Evolution of Massive Close Binaries Including Stellar Wind Mass Loss

Vanbeveren, D., De Grève, J.P., van Dessel, E.L., de Loore, C. **73**, 19

The Influence of Stellar Wind on the Evolution of Massive Binaries with an Application to Massive X-ray Binaries

Vanbeveren, D., De Grève, J.P. **77**, 295

Short Time Changes in the Terminal Velocity of the Stellar Wind of α Cam (09.51a)

de Jager, C., Lamers, H.J.G.L.M., Macchetto, F., Snow, T.P. **79**, L28

Evolution of Massive He Burning Stars Losing Mass by Stellar Wind. An Application to WR Binaries

Vanbeveren, D., Packett, W. **80**, 242

The Evolution of Rotational Velocity in O Type Stars

Packet, W., Vanbeveren, D., De Grève, J.P., de Loore, C., Sreenivasan, S.R. **82**, 73

Turbulent Mixing of Stellar Winds and Interstellar Gas

Kahn, F.D. **83**, 303

Do all Binary X-ray Pulsars Spin-up by Accretion from a Keplerian Disc?

Savonije, G.J. **83**, 375

A Stellar Wind Model for Herbig-Haro Objects

Canto, J. **86**, 327

X-ray Induced Shocks in Stellar Winds

Fransson, C., Fabian, A.C. **87**, 102

A Three-dimensional Model of IC 1396

Wendker, H.J., Baars, J.W.M. **89**, 180

A Discussion of the Eccentric Binary Hypothesis for Transient X-Ray Sources. II. Gradual Acceleration Stellar Wind Model

Avni, Y., Goldman, I. **90**, 44

An Anonymous Ring Nebula around a WC 6 Star in Carina

Lortet, M.C., Niemela, V.S., Tarsia, R. **90**, 210

IUE Observations of Two Late Type Stars: R Aql and W Hya

Kafatos, M., Michalitsianos, A.G., Hobbs, R.W. **92**, 320

Radio Recombination Lines in MWC 349

Altenhoff, W.J., Strittmatter, P.A., Wendker, H.J. **93**, 48

Multiple Critical Points in Stellar Winds with Divergent Geometries

Kuin, N.P.M. **96**, 325

Long Term X-ray Observations of SMC X-1 Including a Turn-on

Bonnet-Bidaud, J.M., van der Klis, M. **97**, 134

Photoelectric Scanner Measurements of Balmer Emission Line Profiles for Southern Be stars. II. A Survey for Variations

Dachs, J., Eichendorf, W., Schleicher, H., Schmidt-Kaler, Th., Stift, M., Tüg, H. **97**, 417; **43**, 427

S 106: An H II-region Driven by a Stellar Wind?

Hippelein, H., Münch, G. **99**, 248

Far-UV Wind Line Profile Changes in the O-type Star HD 175754

Carrasco, L., Costero, R., Stalio, R. **100**, 183

Monitoring Line Profile Changes in κ Orionis, BO.51A

Stalio, R., Sedmak, G., Rusconi, L. **101**, 168

On Stellar Wind Accretion in Widely Separated X-ray Binaries, and the Nature of 4U0115+63

Avni, Y., Goldman, I. **102**, 12

Line Widths in Peculiar Emission Line Objects

Swings, J.P., Andriolat, Y. **103**, L3

On the Theory of Thermally Sustained Stellar Winds

Souffrin, P. **106**, 14

On the Ionization and Velocity Structure of Expanding Circumstellar Envelopes

Drechsel, H., Rahe, J. **106**, 70

Wind Acceleration in Early-type Stars: The Momentum Problem and the Terminal Velocity

Panagia, N., Macchetto, F. **106**, 266

On Hot Star Winds. I. Radiation-driven Winds

Leroy, M., Lafon, J.-P.J. **106**, 345

On Hot Star Winds. II. Energy Transport - Corona-like Temperature Enhancements

Leroy, M., Lafon, J.-P.J. **106**, 358

Spectroscopy and Infrared Photometry of Cyg OB 2 Stars: Velocity Law and Mass-loss Rates

Leitherer, C., Hefele, H., Stahl, O., Wolf, B. **108**, 102

Non-spherical Stellar Envelopes and Winds: Effects of Structure on Radiative Fluxes and Apparent Mass Loss Rates

Schmid-Burgk, J. **108**, 169

Stellar Wind in the Nucleus of IC 2149

Perinotto, M., Benvenuti, P., Cerruti-Sola, M. **108**, 314

On the Origin of Planetary Nebulae

Nussbaumer, H. **110**, L1

An Exploding 10 M_{\odot} Star: A Model for the Crab Supernova

Hillebrandt, W. **110**, L3

Dynamics of the Supergiant Shell LMC 2 in the Large Magellanic Cloud

Caulet, A., Deharveng, L., Georgelin, Y.M., Georgelin, Y.P. **110**, 185

X-ray and UV-emission from Supernova Shock Waves in Stellar Winds

Fransson, C. **111**, 140

Neutral Hydrogen Associated with Southern Supernova Remnants. II. Lupus Loop

Colomb, F.R., Dubner, G. **112**, 141

Shock Fronts in Wide Binary Systems

Huang, R.Q., Weigert, A. **112**, 281

Stability of Differential Rotation in Stars

Knobloch, E., Spruit, H.C. **113**, 261

The UV Spectrum of the Old Nova HR Del at Different Orbital Phases

Friedjung, M., Andriolat, Y., Puget, P. **114**, 351

Far Infrared Observations of a Star Forming Region in Serpens

Nordh, H.L., van Duinen, R.J., Sargent, A.I., Fridlund, C.V.M.,

Aalders, J.W.G., Beintema, D. **115**, 308

M1-67: A Wind-blown Bubble Carried Along by the High-velocity WR Star 209 BAC?

Solf, J., Carsenty, U. **116**, 54

CO $J=3 \rightarrow 2$ and Submillimetre Continuum Observations of Two Molecular Outflow Sources

Phillips, J.P., White, G.J., Ade, P.A.R., Cunningham, C.T.,

Richardson, K.J., Robson, E.I., Watt, G.D. **116**, 130

Shock Fronts Produced by Stellar Winds in the Interstellar Gas

Huang, R.Q., Weigert, A. **116**, 348

On the photometric differences between luminous OBA type stars in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 53

NGC 2359: the H II-region driven by the WR-star HD 56925

Goudis, C., Hippelein, H., Münch, G. **117**, 127

The morphology and dynamics of the halo of the 30 Doradus Nebula

Cox, P., Deharveng, L. **117**, 265

Erratum: On the photometric differences between luminous OBA type stars in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 368

Pressure distribution at the inner boundary of an astropause caused by a compressible stellar wind

Fahr, H.J., Neutsch, W. **118**, 57

On the stability of toroidal flux tubes in differentially rotating stars

van Ballegooijen, A.A. **118**, 275

Models of stellar differential rotation on the lower main sequence

Moss, D., Vilhu, O. **119**, 47

The ratio of deuterium to hydrogen in interstellar space. V. The line of sight to ϵ Persei

Vidal-Madjar, A., Laurent, C., Gry, C., Bruston, P., Ferlet, R., York, D.G. **120**, 58

A discussion of the infrared and radio region of the calculated spectral energy distribution of O-type stars

Groot, M., Thé, P.S. **120**, 89

Stellar coronae: What can be predicted with minimum flux models?

Hammer, R., Endler, F., Ulmschneider, P. **120**, 141

R 66 (Aeq): an LMC B supergiant with a massive cool and dusty wind

Stahl, O., Wolf, B., Zickgraf, F.-J., Bastian, U., de Groot, M.J.H., Leitherer, C. **120**, 287

The Gum Nebula: new photometric and spectrophotometric results

Chanot, A., Sivan, J.P. **121**, 19

Coronae and winds in evolving stars

Robbrecht, W., de Loore, C., Olson, G. **121**, 286

A search for UV-line profile variability in five O-stars

Franco, M.L., Kontizas, E., Kontizas, M., Stalio, R. **122**, 9

Biconical nebulae and early-type stars: a model for S 106

Dyson, J.E. **124**, 77

Evidence of hourly variations in the deuterium Lyman line profiles toward ϵ Persei

Gry, C., Laurent, C., Vidal-Madjar, A. **124**, 99

AB Aurigae and its variable hydrogen lines

Finkenzeller, U. **124**, 157

Relaxation oscillations and double temperature structures in stellar coronae

Hearn, A.G., Kuin, N.P.M., Martens, P.C.H. **125**, 69

Estimated energy and momentum input to the interstellar medium for several external galaxies

Tarrab, I. **125**, 308

Mg II profile variations of Zeta Aurigae

Ahmad, I.A., Chapman, R.D., Kondo, Y. **126**, L5

A study of ultraviolet spectra of ζ Aur/VV Cep systems. II. Mass loss of supergiants in ζ Aur, 32 Cyg, and 31 Cyg

Che, A., Hempe, K., Reimers, D. **126**, 225

Dust-driven winds. I. A two-fluid model and its numerical solution

Berruyer, N., Frisch, H. **126**, 269

Evidence for a warm wind from the red star in symbiotic binaries

Friedjung, M., Stencel, R.E., Viotti, R. **126**, 407

The maser strength of OH/IR stars, evolution of mass loss and the creation of a superwind

Baud, B., Habing, H.J. **127**, 73

Magnetic braking and tidal energy dissipation in close binaries

Verbunt, F., Hut, P. **127**, 161

Stokes Parameter, see Magnetic Field

The statistical behaviour of normalized Stokes parameters

Clarke, D., Stewart, B.G., Schwarz H.E., Brooks, A. **126**, 260

Stroemgren Photometry

Comparison Between the Observed Intrinsic Colour $(b-y)_0$ and the Calculated Theoretical Index $(b-y)$ for A-type Stars

Burkhar, C., Van't Veer, C., Faraggiana, R. **103**, 145

Spectroscopic and Photometric Observations of White Dwarfs

Koester, D., Weidemann, V. **108**, 406

uvby Photometry in McCormick Proper Motion Fields

Degewij, J. **110**, 183; **48**, 481

High Angular Resolution uvby β Observations of Stars Earlier than GO in the Intermediate and Low Latitude Areas SA 128 and SA 156

Knude, J. **111**, 210; **49**, 69

Four-colour and H β Photometry for O-A0 type Stars in Three Regions Near the Galactic Equator

Westin, T.N.G. **112**, 180; **49**, 561

Violet and ultraviolet continua of WUMa systems of the basis of uvby photometry observations

Rucinski, S.M. **127**, 84

The λ Boo stars: a reappraisal

Hauck, B., Slettebak, A. **127**, 231

Four-colour photometry of eclipsing binaries. XVI. Light curves of VV Pyxidis

Clausen, J.V., Nordström, B. **127**, 425; **54**, 149

Metal abundance and age of the globular cluster NGC 6397 from photoelectric uvby- β photometry of turn-off stars

Ardeberg, A., Lindgren, H., Nissen, P.E. **128**, 194

Four-colour photometry of eclipsing binaries. XVIII. Lightcurves of PV Puppis

Reipurth, B., Clausen, J.V., Nordström, B. **128**, 261; **54**, 301

Störmer Problem

Families of Long Periodic Solutions for the Perturbed Störmer Problem

Klimopoulos, S., Zagouras, C.G. **77**, 371; **38**, 1

Subdwarfs

A Sample of New Hot Subluminous Stars Taken from the List of Ultraviolet Objects Detected by the S2/68 Sky Survey Experiment

Berger, J., Fringant, A.-M. **85**, 367

On Ionization Equilibrium in Subdwarfs

Foy, R., Proust, D. **86**, 157

SB 21, An Extremely Helium-rich Subdwarf O-star

Hunger, K., Kudritzki, R.P. **88**, L4

HD 113001: Photometric Separation

Goy, G. **88**, 370

The Helium Content of the Blue Star Near the Center of SN 1006

Simon, K.P., Hunger, K., Kudritzki, R.P. **98**, 211

LB 3459 - An O-type Subdwarf Eclipsing Binary System. Non-LTE Analysis of the Primary

Kudritzki, R.P., Simon, K.P., Lynas-Gray, A.E., Kilkenny, D., Hill, P.W. **106**, 254

The Schweizer-Middleditch Star: Not a Stellar Remnant of SN1006

Savedoff, M.P., Van Horn, H.M. **107**, L3

The O Type Subdwarf ROB 162 in the Globular Cluster NGC 6397

Caloi, V., Castellani, V., Panagia, N. **107**, 145

Non-LTE Analysis of Subluminous O-Stars. II. The Hydrogen-deficient Subdwarf O-Star HD 127493

Simon, K.P. **107**, 313

Spectral Analysis of the OB Subdwarf HD 149 382

Baschek, B., Kudritzki, R.P., Scholz, M., Simon, K.P. **108**, 387

The OB Subdwarf Feige 66, a Chemical-composition Twin to HD 149382

Baschek, B., Höflich, P., Scholz, M. **112**, 76

Non-LTE analysis of subluminous O-stars. V. The binary system HD 128220

Gruschinske, J., Hamann, W.-R., Kudritzki, R.-P., Simon, K.P., Kaufmann, J.P. **121**, 85

Non-thermal phenomena in the atmosphere of hot subdwarfs: X-ray upper limit for BD-3°2179

D'Antona, F., Rossi, L., Viotti, R. **122**, 339

Submillimetre Radiation

Detection of the CO J=4→3 Transition from the Kleinman Low Nebula

van Vliet, A.H.F., de Graauw, Th., Lee, T.J., Lidholm, S., v.d. Stadt, H. **101**, L1

Rapid variability in 3C 273 at 1 mm

Sherwood, W.A., Kreysa, E., Gemünd, H.-P., Biermann, P. **117**, L5

Sun, see also Abundance, solar; and solar ...

N III Lines for Solar Diagnostics

Nussbaumer, H., Storey, P.J. **71**, L5

On the Nonradial Oscillations of the 1968 Nonstandard Solar Model

Rouse, C.A. **71**, 95

Dirty Solar Models

Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **73**, 121

Comparison of Solar and Stellar Flux Distributions and the Determination of the B-V and U-B Colors of the Sun

Clements, G.L., Neff, J.S. **75**, 193

Dirac's Cosmology: Solar Models to Test Two Hypotheses of Matter Creation

Carignan, C., Beaudet, G., Sirois, A. **75**, 291

Hydromagnetic Surface Waves on Cylindrical Flux Tubes

Wentzel, D.G. **76**, 20

Interstellar Hydrogen Subject to a Net Repulsive Solar Force Field

Fahr, H.J. **77**, 101

Solar Pulsations and Angular Coherence of Atmospheric Transparency Fluctuations

Grec, G., Fossat, E., Brandt, P., Deubner, F.L. **77**, 347

Calculation of Pseudo Solar Narrow Band Oscillations Produced by Atmospheric Differential Extinction

Grec, G., Fossat, E. **77**, 351

Solar Models, Helium Content and Mixing Length

Mazzitelli, L. **79**, 251

Erratum: Dirty Solar Models

Christensen-Dalsgaard, J., Gough, D.O., Morgan, J.G. **79**, 260

Stochastic Stellar Evolution. II. Fluctuations Due to Convection

Bertelli, G., Chiosi, C., Perchang, P. **79**, 261

Measurements of the Absolute Solar Brightness Temperature in the Far-infrared with a Balloon-borne Interferometer

Rast, J., Cartier, F., Kneubühl, F.K., Huguenin, D., Müller, E.A. **83**, 199

Non-radial Oscillations of a 1 M Star with an Initial Discontinuity in Chemical Composition

Boury, A., Scuflaire, R., Noels, A., Gabriel, M. **85**, 20

Stability of the Sun Against Nonradial Thermal Modes

Saio, H., Cox, J.P., Hansen, C.J. **85**, 263

The Sun among the Stars. II. Solar Color, Hyades Metal Content and Distance

Hardorp, J. **88**, 334

Flows along Magnetic Flux Tubes. I. Equilibrium and Buoyancy of a Slender Magnetic Loop in the Interior of a Star

Schüssler, M. **89**, 26

The Sun among the Stars. III. Energy Distributions of 16 Northern G-type Stars and the Solar Flux Calibration

Hardorp, J. **91**, 221

A "Fast" Model of the Solar Convection Zone

Belvedere, G., Paternò, L., Roxburgh, I.W. **91**, 356

Erratum: Evidence for a Lower Limit of Solar Magnetic Field Strengths

Wiehr, E. **91**, 377

On the Photometric Colour Indices of the Sun

Chmielewski, Y. **93**, 334

Screening Effects in the Solar Convection Zone

Stix, M. **93**, 339

Solar H I Ly α Far Wing Measurement

Jouchoux, A., Vial, J.C., Artzner, G.E., Gouttebroze, P., Lemaire, P. **93**, 415

Power Spectrum of Differential Refraction and Comparison with Solar Diameter Fluctuation Measurements

Fossat, E., Grec, G., Harvey, J.W. **94**, 95

Stellar Evolution with Turbulent Diffusion Mixing. III. The Solar Model and the Neutrino Problem

Schatzman, E., Maeder, A., Angrand, F., Glowinski, R. **96**, 1

- The Sun among the Stars. IV. Albedos of Uranus and Neptune and the Solar Color
Hardorp, J. **96**, 123
- The Solar Neutrino Problem
Opher, R. **98**, 39
- A Possible Capture Process for the Solar Central Black Hole
Picchio, G. **99**, 31
- The Solar Structure and the Five-minute Oscillation
Scuflaire, R., Gabriel, M., Noels, A. **99**, 39
- Observations du Soleil en 1979 a l'astrolabe du Cerga
Laclare, F., Glentzlin, M. **103**, 207; **46**, 1
- The Sun Among the Stars. V. A Second Search for Solar Spectral Analogs. The Hyades' Distance
Hardorp, J. **105**, 120
- How to Measure the Sun like a Star
Tüg, H. **105**, 395
- A Direct *UBV* Color Measurement of the Sun
Tüg, H., Schmidt-Kaler, T. **105**, 400
- The Solar Neutrino Problem
Taylor, J.B., Connor, J.W. **107**, L1
- The Sun Among the Stars. VI. The Solar Analog HD 44594
Hardorp, J., Tüg, H., Schmidt-Kaler, T. **107**, 311
- Solar Site-testing Campaign of JOSO on the Canary Islands in 1979
Brandt, P.N., Wöhl, H. **109**, 77
- Observations of the Sun at the CERGA Astrolabe in 1980 (Text in French)
Laclare, F., Glentzlin, M., Leister, N.V., Chollet, F. **110**, 181; **48**, 371
- Seeing-independent Definitions of the Solar Limb Position
Brown, T.M. **116**, 260
- Coherent scattering in the solar spectrum: survey of linear polarization in the range 3165-4230 Å
Stenflo, J.O., Twerenbold, D., Harvey, J.W. **121**, 164; **52**, 161
- Observations of the Sun at the CERGA astrolabe in 1981
Laclare, F., Glentzlin, M. **121**, 330; **52**, 265
- A matrix photodiode array to measure Doppler shifts of solar spectral lines
Küveler, G., Wöhl, H. **122**, 69
- Hydrostatic reaction of the Sun to local disturbances
Däppen, W. **124**, 11
- Solar diameter measurements (Text in French)
Laclare, F. **125**, 200
- Photospheric faculae-III-intensity, and magnetic field mapping of a typical element of the photospheric network
Daras-Papamargaritis, H., Koutchmy, S. **125**, 280
- Analysis of solar observations made with the CERGA astrolabe (Text in French)
Bougéard, M., Chollet, F., Laclare, F. **126**, 161
- The circularly polarized Sun at 12.6 cm wavelength
Lang, K.R., Willson, R.F. **127**, 135
- Sunspots**
- TiH in M-type Stars and Sunspots
Yerle, R. **73**, 346
- Astronomical Applications of Infra-red Television Imaging
Lamy, P.L., Nguyen-Trong, T., Adjabschirzadeh, A., Koutchmy, S. **77**, 257
- The Variation of the Mean Diameters of the Photospheric Granules near the Sunspots
Macris, C.J. **78**, 186
- Improved Observations of Sunspot Umbral Dots
Loughhead, R.E., Bray, R.J., Tappere, E.J. **79**, 128
- A Model for Sunspot Associated Emission at 6 cm Wavelength
Alissandrakis, C.E., Kundu, M.R., Lantos, P. **82**, 30
- Line Shifts and Asymmetries in Sunspot Penumbrae
Stellmacher, G., Wiehr, E. **82**, 157
- The Infrared Ca^+ Lines in Sunspot Umbrae
Kollatschny, W., Stellmacher, G., Wiehr, E., Falipou, M.A. **86**, 245
- Molecular Spectroscopy in Sunspots, Theoretical Interpretation of TiO Line Equivalent Width Measurements
Boyer, R. **86**, 267; **40**, 277
- Photometric Analysis of the Sunspot Umbral Dots. I. Dynamical and Structural Behaviour
Adjabschirzadeh, A., Koutchmy, S. **89**, 88
- Identification of the CrH Molecule in a Sunspot Spectrum
Engvold, O., Wöhl, H., Brault, J.W. **91**, 380; **42**, 209
- Differential Rotation and Meridional Motions of Sunspots in the Years 1940-1968
Balthasar, H., Wöhl, H. **92**, 111
- Sunspot Chromospheres and Their Relation to the Chromospheres of Late Main Sequence Stars
Mattig, W., Kneer, F. **93**, 20
- On the Solar Rotation Elements as Determined from Sunspot Observations
Stark, D., Wöhl, H. **93**, 241
- Umbral Models with Enhanced Continuum Opacity
Stellmacher, G., Wiehr, E. **95**, 229
- The Brightness Distribution in Sunspot Penumbrae
Grossmann-Doerth, U., Schmidt, W. **95**, 366
- Magnetic Fields Observed in a Sunspot and Faculae Using 12 Lines Simultaneously
Semel, M. **97**, 75
- Erratum:* Differential Rotation and Meridional Motions of Sunspots in the Years 1940-1968
Balthasar, H., Wöhl, H. **98**, 422
- Photometric Analysis of the Sunspot Umbral Dots: 2 - Size, Shape, and Temperature
Koutchmy, S., Adjabschirzadeh, A. **99**, 111
- A Unified Working Model for the Atmospheric Structure of Large Sunspot Umbrae
Stade, J. **100**, 284
- The Chromosphere Above Sunspot Umbrae. III. Spatial and Temporal Variations of Chromospheric Lines
Kneer, F., Mattig, W., v. Uexküll, M. **102**, 147
- Line Profiles and Magnetic Field in Penumbral Fine Structures
Stellmacher, G., Wiehr, E. **103**, 211
- Propagation of Waves in an Atmosphere in the Presence of a Magnetic Field. IV. Alfvén Waves in Sunspot Umbrae
Bel, N., Leroy, B. **104**, 203
- Table of Solar Diatomic Molecular Lines. IV. Spectral Range: 7600-8100
Boyer, R., Sotirovski, P., Harvey, J.W. **106**, 181; **47**, 145
- A Morphological Study of Some Umbral Fine Structures
Soltan, D. **107**, 211
- Effect of Spots on a Star's Radius and Luminosity
Spruit, H.C. **108**, 348
- The Flow of Heat near a Starspot
Spruit, H.C. **108**, 356
- Mass Motions in the Solar Chromosphere and Transition Zone
Mein, P., Simon, G., Vial, J.C., Shine, R.A. **111**, 136
- Differential Rotation and Meridional Motions of Sunspots from 1874 to 1902
Arévalo, M.J., Gomez, R., Vázquez, M., Balthasar, H., Wöhl, H. **111**, 266

Angular Velocity of Sunspots Along the Butterfly Diagram

Godoli, G., Mazzucconi, F. **116**, 188

Erratum: Differential rotation and meridional motions of sunspots from 1874 to 1902

Arévalo, M.J., Gomez, R., Vázquez, M., Balthasar, H., Wöhl, H. **117**, 170

Photometric analysis of sunspot umbral dots. III. Spectrophotometry and preliminary model of a 2-component umbra

Adjabshirzadeh, A., Koutchmy, S. **122**, 1

The chromosphere above sunspot umbrae. IV. Frequency analysis of umbral oscillations

v. Uexküll, M., Kneer, F., Mattig, W. **123**, 263

Solar rotation 1947-1981 - determined from sunspot data

Lustig, G. **125**, 355

Supergalaxies, see Clusters of Galaxies

Supergiants

Radial Velocity Variations of B 1 Ia-O Supergiants

Sterken, C., Wolf, B. **71**, 270; **35**, 69

A Deep Objective Prism Survey of the Two Regions in the Large Magellanic Cloud for OB and Supergiant Stars

Davis Philip, A.G., Sanduleak, N. **72**, 379; **35**, 347

LTE and Non-LTE Abundance Analyses of Nitrogen Deficient Supergiants in a Loose Association

Dufton, P.L. **73**, 203

The Visible Spectrum of β Ori, B8 I

Crivellari, L., Flora, U., Rusconi, L., Sedmak, G. **73**, 365; **36**, 73

Spectroscopic Observations of the Early Type B-Supergiant Wray 977 (4 U 1223-62): Description of the Spectrum and Classification

Hammerschlag-Hensberge, G., de Loore, C., van den Heuvel, E.P.J., Zuiderwijk, E.J. **76**, 245

 H_2 Profile Variability in κ Orionis, B0.5 Ia

Stalio, R., Rusconi, L., Sedmak, G., Arpigny, C., Georgelin, Y., Rocca, B. **77**, L10

On the Spectrographic and Photometric Data for the Brightest Stars in the Small Magellanic Cloud

Ardeberg, A., Maurice, E. **77**, 269

Structure and Kinematics of the Small Magellanic Cloud as Outlined by Its Brightest Stars

Ardeberg, A., Maurice, E. **77**, 277

IUE Observations of the Extreme B 1 Supergiant ζ^1 Sco

Appenzeller, I. **77**, 372; **38**, 51

The UV Resonance Lines of ζ^1 Sco

Wolf, B., Appenzeller, I. **78**, 15

Long Time Baseline VBLUW Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757, and HDE 269006 (I)

van Genderen, A.M. **78**, 249; **38**, 151

Short Time Changes in the Terminal Velocity of the Stellar Wind of α Cam (09.5 Ia)

de Jager, C., Lamers, H.J.G.L.M., Macchetto, F., Snow, T.P. **79**, L28

High Luminosity Stars. I. UBV Intrinsic Colors

Dubois, P. **79**, 143

Photometry of 5 Galactic G-type Supergiants

Stift, M.J. **80**, 134

Long Time Baseline VBLUW Photometry of Four of the Most Luminous LMC Supergiants HD 33579, HD 35343=S Dor, HDE 268757 and HDE 269006 (II)

van Genderen, A.M. **80**, 330; **38**, 381

Circumstellar Absorption Lines in the Ultraviolet Spectrum of α Scorpii (M1.5 Iab+B2.5V)

van der Hucht, K.A., Bernat, A.P., Kondo, Y. **82**, 14

Birthrate and Mass Function in the Magellanic Clouds

Dennefeld, M., Tammann, G.A. **83**, 275

Resonance Line Profiles in A Type Supergiants from IUE and Copernicus Spectra

Praderie, F., Talavera, A., Lamers, H.J.G.L.M. **86**, 271

Evolution of a Blue Supergiant with a Neutron Star Companion Immersed in Its Envelope

Delgado, A.J. **87**, 343

A Discussion on Three Yellow Variable Supergiants in and Near the Cepheid Instability Strip: V 810 Cen (= HD 101947), Tr. 27-102 (= HD 159378) and BL Tel (F), Based on VBLUW Photometry and the Long-period Cepheids Absence in the Galaxy

van Genderen, A.M. **88**, 77

Spectroscopic Data for Bright Southern Type F Supergiants

Castley, J.C., Watson, R.D. **89**, 252; **41**, 397

The Numbers of Red Supergiants and WR Stars in Galaxies: An Extremely Sensitive Indicator of Chemical Composition

Maeder, A., Lequeux, J., Azzopardi, M. **90**, L17

Supergiant Variability: Amplitudes and Pulsation Constants in Relation with Mass Loss and Convection

Maeder, A. **90**, 311

Photoelectric Photometry of Stars in the Small Magellanic Cloud

Ardeberg, A. **91**, 261; **42**, 1

A Study of H_2 Profile Variations in κ Orionis, B 0.5 Ia

Rusconi, L., Sedmak, G., Stalio, R., Arpigny, C. **92**, 324; **42**, 347

Study of the Variable F-type Supergiants HD 161796 and HD 163506 in Radial Velocity and Photometry

Burki, G., Mayor, M., Rufener, F. **92**, 325; **42**, 383

Supergiant and Giant M Type Stars in the Large Magellanic Cloud

Westerlund, B.E., Olander, N., Hedin, B. **95**, 395; **43**, 267

New VBLUW Photometry of the X-ray Binary HD 153919 (4U 1700-37): The Optical Micro Variability of the O 6.5 f Supergiant

van Genderen, A.M., Windhorst, R.A. **97**, 79

The Most Massive Stars Evolving to Red Supergiants: Evolution with Mass Loss, WR Stars as Post-red Supergiants and Pre-supernovae

Maeder, A. **99**, 97

Observations of the Brightness Structure of α Orionis

Ricort, G., Aime, A., Vernin, J., Kadiri, S. **99**, 232

On the Nature of the Two Supergiant Components in the System of V 810 Cen=HR 4511=HD 101947

van Genderen, A.M. **100**, 175

Radial Velocities for Different Spectral Lines of B and A Supergiants in Our Galaxy and in the Large Magellanic Cloud

Kontizas, E., Kontizas, M. **101**, 420; **45**, 121

The Ultraviolet Spectrum of UW Canis Majoris

Drechsel, H., Rahe, J., Kondo, Y., McCluskey Jr., G.E. **102**, 282; **45**, 473

A High Resolution IUE Spectrum of the GO-G 5 Ia Supergiant HR 8752

Stickland, D.J., Lambert, D.L. **102**, 296

Grids of Evolutionary Models for the Upper Part of the HR Diagram. Mass Loss and the Turning of Some Red Supergiants into WR Stars

Maeder, A. **102**, 401

Detailed Analysis of a G Supergiant in the Small Magellanic Cloud

Foy, R. **103**, 135

High Resolution Spectrophotometry of the O1 Line (8446 Å)
Towards Cyg OB2 No. 12

Iyengar, K.V.K., Stafela, F., Cosmovici, C.B. **103**, 382

Effective Temperatures, and Radii of Luminous O and B Stars: A
Test for the Accuracy of the Model Atmospheres

Remie, H., Lamers, H.J.G.L.M. **105**, 85

On the Radius Determination of the Variable F-type Supergiant
BL Tel(F)

van Genderen, A.M. **105**, 250

Variability and Mass Loss in the Extreme Supergiant ζ^1 Sco

Burki, G., Heck, A., Bianchi, L., Cassatella, A. **107**, 205

VBLUW Photometry of Magellanic Cloud Super- and Hyper-
giants, Made in 1977 up to 1979

van Genderen, A.M., van Leeuwen, F., Brand, J. **107**, 416; **47**,
591

An H II Region Near NML Cygnus

Habing, H.J., Goss, W.M., Winnberg, A. **108**, 412

An Exploding 10 M_{\odot} Star: A Model for the Crab Supernova

Hillebrandt, W. **110**, L3

Equivalent Width Measurements in Galactic Supergiant and in
Small Magellanic Cloud Star Spectra

Dubois, P. **110**, 182; **48**, 375

Mass Loss, Linear Polarization Variability, and Duplicity of the
Luminous B2 Supergiant HD 80077

Knoechel, G., Moffat, A.F.J. **110**, 263

AG Car: A Galactic S Dor Variable

Wolf, B., Stahl, O. **112**, 111

The Nature of the IE1145.1-6141 Optical Counterpart

Ilovaisky, S.A., Chevalier, C., Motch, C. **114**, L7

The Two-colour Diagram of Luminous Stars in the Magellanic
Clouds (Text in German)

Isserstedt, J. **115**, 97

The Mid-ultraviolet Spectrum of ϵ Aurigae

Castelli, F., Hoekstra, R., Kondo, Y. **115**, 217; **50**, 233

The Combined Effect of Mass Loss and Overshooting. I. The Evo-
lution of 35 M_{\odot} to 100 M_{\odot} Stars During Core Hydrogen Burning

Doom, C. **116**, 303

On the photometric differences between luminous OBA type stars
in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 53

Erratum: On the photometric differences between luminous OBA
type stars in the LMC with and without P Cygni characteristics

van Genderen, A.M., Groot, M., Thé, P.S. **117**, 368

Principal components analysis of spectral data. II. Error analysis
and applications to interstellar reddening, luminosity classifica-
tion of M supergiants, and the analysis of VV Cephei stars

Whitney, C.A. **119**, 325; **51**, 463

R 66 (Aeq): an LMC B supergiant with a massive cool and dusty
wind

Stahl, O., Wolf, B., Zickgraf, F.-J., Bastian, U., de Groot,
M.J.H., Leitherer, C. **120**, 287

P Cygni stars as an intermediate stage between red supergiants and
Wolf-Rayet stars

Lamers, H.J.G.L.M., de Groot, M., Cassatella, A. **123**, L8

The populations of massive stars in the Galaxy: their frequency
gradients in relation to metallicity and initial mass function

Meylan, G., Maeder, A. **124**, 84

Notes on the heavily reddened and variable A-type supergiant
CD-33° 12119

van Genderen, A.M., Hammerschlag-Hensberge, G., Thé, P.S.
124, 197

A search for rapid spectroscopic variability in the early-type super-
giants γ and θ Ara

Baade, D. **124**, 211

Nineteen new spectroscopic binaries and the rate of binary stars
among F-M supergiants

Burki, G., Mayor, M. **124**, 256

A catalogue of late-type supergiant stars in the Small Magellanic
Cloud

Prévot, L., Martin, N., Maurice, E., Rebeiro, E., Rousseau, J.
125, 176; **53**, 255

The relation between the luminosity of the brightest blue star and
the luminosity of its parent galaxy

Schild, H., Maeder, A. **127**, 238

Supergranulation, see Solar Granulation

Supermassive Stars

Vibrational Instability of a 3000 M_{\odot} Star and the R 136a Problem

Ledoux, P., Noels, A., Boury, A. **108**, 49

Supernovae and Supernova Remnants, see also Crab Nebula, Pul-
sars

Supernova Remnant IC 443: Fast Filaments and High-velocity
Gas

Lozinskaya, T.A. **71**, 29

On the Naming of Crab-type Supernova Remnants

Shakeshaft, J.R. **72**, L9

Radio Continuum Observations at 1420 MHz of the New SNR
G65.2+5.7 in Cygnus

Reich, W., Berkhuijsen, E.M., Sofue, Y. **72**, 270

Photometric Properties of Type II Supernovae

Barbon, R., Ciatti, F., Rosino, L. **72**, 287

H I Absorption in the Direction of CL 4

Goss, W.M., van Gorkom, J.H., Shaver, P.A. **73**, L17

New Redshifts of Parent Galaxies of Supernovae

Barbon, R., Capaccioli, M., Tifft, W.G. **73**, 366; **36**, 129

Collapsing Stellar Cores and Supernovae

Epstein, R.I., Noorgaard, H., Bond, J.R. **74**, 353

Continuum Observations of the Supernova Remnant CTA 1 at
2695 MHz

Sieber, W., Haslam, C.G.T., Salter, C.J. **74**, 361

The Evolution of the Radio Emission from Cas A

Dickel, J.R., Greisen, E.W. **75**, 44

Observations of the Remnant of Tycho's Supernova (3C 10) at a
Frequency of 10.7 GHz

Klein, U., Emerson, D.T., Haslam, C.G.T., Salter, C.J. **76**, 120

Supernova: A New Selection Effect

Shaw, R.L. **76**, 188

X-ray Observations of Some Radio Supernova Remnants by ANS

Gronenschild, E.H.B.M. **77**, 53

Evidence for Six New Low Surface Brightness Supernova Rem-
nants

Bonsignori-Facondi, S.R., Tomasi, P. **77**, 93

Rotation Measure and Turbulent Structure of Tycho's Supernova
Remnant, G 120.1+1.4

Lerche, I., Caswell, J.L. **77**, 117

Electron Captures in Nuclear Statistical Equilibrium

Yokoi, K., Neo, S., Nomoto, K. **77**, 210

New Optical Observations of Galactic Supernova Remnants

Zealey, W.J., Elliott, K.H., Malin, D.F. **77**, 371; **38**, 39

G 126.2+1.6, a Supernova Remnant near the X-ray transient 4U
0115+63

Reich, W., Kallas, E., Steube, R. **78**, L13

- Observations of the Supernova Remnant 3C391 at 1.4 and 10.7 GHz
 Goss, W.M., Skellern, D.J., Watkinson, A., Shaver, P.A. **78**, 75
- Measurements of the Radio Flux Density of Tycho's SNR Separated by a 15-year Interval
 Dickel, J.R., Spangler, R. **79**, 243
- A Magnetohydrodynamical Supernova Model
 Müller, E., Hillebrandt, W. **80**, 147
- On the Origin of High-velocity Gas H₂-emission from the Cygnus Loop and IC 443
 Bychkov, K.V., Lebedev, V.S. **80**, 167
- Supernova Remnants in M 33
 Sabbadin, F. **80**, 212
- An Early-type Binary Model for SS 433
 van den Heuvel, E.P.J., Ostriker, J.P., Petterson, J.A. **81**, L7
- Type I Supernovae: IV. The Spectrum before the Maximum of Luminosity
 Gordon, C. **81**, 43
- Stellar Collapse: Adiabatic Hydrodynamics and Shock Wave Propagation
 Müller, E., Różycka, M., Hillebrandt, W. **81**, 288
- Radio Polarization of the Vela X Supernova Remnant
 Milne, D.K. **81**, 293
- On the Rotation Measure and Turbulent Structure of the Vela Supernova Remnant
 Lerche, I., Milne, D.K. **81**, 302
- A Catalogue of Emission Regions in M 33
 Sabbadin, F., Rafanelli, P., Bianchini, A. **81**, 389; **39**, 97
- H I Absorption in the Direction of SS 433
 van Gorkom, J.H., Goss, W.M., Shaver, P.A. **82**, L1
- Nucleosynthetic Yields and the History of the Stellar Birthrate
 Wheeler, J.C., Miller, G.E., Scalzo, J.M. **82**, 152
- ²²Ne and ²⁶Al Nucleosynthesis in Novae and Supernovae Outbursts
 Vangioni-Flam, E., Audouze, J., Chièze, J.P. **82**, 234
- Neutral Hydrogen Associated with Southern Supernova Remnants. I. "G 261.9, +5.5"
 Colomb, F.R., Dubner, G.M. **82**, 244
- The Absolute Magnitude and the Type Classification of CN 1181 = 3 C 58
 Panagia, N., Weiler, K.W. **82**, 389
- Atomic Hydrogen in a Field in Cygnus X Containing the Supernova Remnant G 78.2+2.1
 Landecker, T.L., Roger, R.S., Higgs, L.A. **82**, 393; **39**, 133
- The Crab Nebula - A Model
 Kundt, W., Krotscheck, E. **83**, 1
- Kinematics of Old Supernova Remnants
 Lozinskaya, T.A. **84**, 26
- Continuum Observations of the Supernova Remnants W 50 and G 74.9+1.2 at 2695 MHz
 Geldzahler, B.J., Pauls, T., Salter, C.J. **84**, 237
- A Catalogue of Supernova Remnant Candidates in Nearby Galaxies
 D'Odorico, S., Dopita, M.A., Benvenuti, P. **84**, 269; **80**, 67
- A Correspondence Between Optical and Radio Emission in the Crab-type Supernova Remnant 3C 58
 Weiler, K.W. **84**, 271
- The Unique Spectrum of SS 433, a Star Inside a Supernova Remnant
 Mammano, A., Ciatti, F., Vittone, A. **85**, 14
- The UBVR-photometry of the Supernova in NGC 4321
 Balinskaya, I.S., Bychkov, K.V., Neizvestny, S.I. **85**, L19
- The Radio Emission of the Supernova Remnants CTB1 and the Cygnus Loop
 Dickel, J.R., Willis, A.G. **85**, 55
- X-ray Observations of the Cygnus Loop by ANS
 Gronenschild, E.H.B.M. **85**, 66
- On the Spectral Index Distribution of Supernova Remnants
 Lerche, I. **85**, 141
- X-ray Characteristics of the Lupus Loop and SN 1006 Supernova Remnants
 Toor, A. **85**, 184
- The Spectrum of the Remnant of Kepler's Supernova of 1604
 van den Bergh, S. **86**, 155
- Further High Resolution Radio Observations of the Supernova Remnant G 84.2-0.8
 Matthews, H.E., Shaver, P.A. **87**, 255
- Intensity and Spectrum of the Continuum Gamma Ray Emission from Supernovae
 Cavallo, G., Pacini, F. **88**, 367
- The Source Distribution of Cosmic-ray Electrons
 Massaro, E., Sacco, B., Manzo, G. **90**, 140
- Vela X and the Evolution of Plerions
 Weiler, K.W., Panagia, N. **90**, 269
- A New Equation of State of Supernova Matter
 El Eid, M.F., Hillebrandt, W. **91**, 381; **42**, 215
- Astrophysical Interpretation of the $\lambda\lambda$ 1200-7300 Å Emission Line Spectrum of a Filament in the Cygnus Loop Supernova Remnant
 D'Odorico, S., Benvenuti, P., Dennefeld, M., Dopita, M.A., Greve, A. **92**, 22
- G 40.5-0.5: A Previously Unrecognised Supernova Remnant in Aquila
 Downes, A.J.B., Pauls, T., Salter, C.J. **92**, 47
- G 93.3+6.9: A Highly Polarized Supernova Remnant
 Haslam, C.G.T., Pauls, T., Salter, C.J. **92**, 57
- Observations of the Old Supernova Remnant S147 at 11.1 and 18.2 cm Wavelengths
 Kundu, M.R., Angerhofer, P.E., Fürst, E., Hirth, W. **92**, 225
- X-ray Characteristics of Loop I and the Local Interstellar Medium
 Davelaar, J., Bleeker, J.A.M., Deerenberg, A.J.M. **92**, 231
- The Calculation of the Optical Spectra of the Cygnus Loop
 Contini, M., Kozlovsky, B.Z., Shaviv, G. **92**, 273
- The Dependence of the "Sigma-D Relation" of Supernova Remnants on the Energy Spectrum of Radiating Particles
 Göbel, W., Hirth, W., Fürst, E. **93**, 43
- A Supernova in NGC 1199
 Laques, P., Nieto, J.-L., Vidal, J.-L., Augé, A., Despiaud, R. **93**, 53
- Electron Capture and Stellar Core Implosion
 Chung, K.C., Kodama, T. **93**, 309
- Radio Observations of the Spectrum and Time Variability of the Luminous Supernova Remnant in NGC 4449
 de Bruyn, A.G., Goss, W.M., van Woerden, H. **94**, L25
- Kinematics of Interstellar H I in the Region $320^\circ \leq l \leq 341^\circ$, $+7^\circ \leq b \leq +26^\circ$
 Olano, C.A., Pöppel, W.G.L. **94**, 151
- A Kinematical Analysis of SS 433 after Two Observing Seasons, 1978-79
 Ciatti, F., Mammano, A., Vittone, A. **94**, 251
- A Multifrequency Study of CTB 80 with the Westerbork Synthesis Radio Telescope
 Angerhofer, P.E., Strom, R.G., Velusamy, T., Kundu, M.R. **94**, 313
- Self Similar Evolution of Evaporative Supernova Remnants
 Chièze, J.P., Lazareff, B. **95**, 194

New Galactic Sources in the BG Catalogue: Search at 1.4 GHz with the Westerbork Synthesis Radiotelescope

Fanti, C., Mantovani, F., Tomasi, P. **95**, 208; **43**, 1

Déterminations optique et radio de vitesses radiales de galaxies parentes de supernovae

Balkowski, C., Le Denmat, G., Nottale, L. **95**, 210; **43**, 121

Late-stage Evolution of a Supernova Remnant. The Structure of the Dense Shell

Prite-Martinez, A. **96**, 283

Radio Observations at 1720 MHz of the Area $38^{\circ}5 \leq l \leq 43^{\circ}5$, $-5^{\circ} \leq b \leq 5^{\circ}$; the Region Surrounding W 50

Downes, A.J.B., Pauls, T., Salter, C.J. **97**, 296

Kinematics of Ring-shaped Nebulae in the LMC. I. The Radial Velocity Field of N 70

Rosado, M., Georgelin, Y.P., Georgelin, Y.M., Laval, A., Monnet, G. **97**, 342

Erratum: X-ray Characteristics of Loop I and the Local Interstellar Medium

Davelaar, J., Bleeker, J.A.M., Deerenberg, A.J.M. **97**, 413

Model Analysis of SN 1969I

Hempe, K. **98**, 19

The Helium Content of the Blue Star Near the Center of SN 1006

Simon, K.P., Hunger, K., Kudritzki, R.P. **98**, 211

2.7 GHz Observations of the Three Old Supernova Remnants CTB1, G116.5+1.1, and G114.3+0.3 with the Effelsberg 100-m Telescope

Reich, W., Braunsfurth, E. **99**, 17

The Most Massive Stars Evolving to Red Supergiants: Evolution with Mass Loss, WR Stars as Post-red Supergiants and Pre-supernovae

Maeder, A. **99**, 97

The r-Process During Explosive Helium Burning in Supernovae

Hillebrandt, W., Klapdor, H.V., Oda, T., Thielemann, F.K. **99**, 195

Erratum: Intensity and Spectrum of the Continuum Gamma Ray Emission from Supernovae

Cavallo, C., Pacini, F. **101**, 159

Near-infrared Spectroscopy of Northern Supernova-remnants

Dennefeld, M., Andrillat, Y. **103**, 44

Synthesis Observations of the Radio Continuum Radiation of the H II Region NGC 7822 (W 1)

Harten, R.H., Goss, W.M., Matthews, H.E., Israel, F.P. **103**, 50

Computer Simulations of Stellar Collapse and Shock Wave Propagation

Hillebrandt, W., Müller, E. **103**, 147

Further Radio Observations of W 50: Total Intensity and Linear Polarization Measurements at 1.7 and 2.7 GHz

Downes, A.J.B., Pauls, T., Salter, C.J. **103**, 277

The Collapse of Rotating Stellar Cores

Müller, E., Hillebrandt, W. **103**, 358

The Point Radio Source in the Supernova Remnant G 78.2+2.1

Higgs, L.A., Roger, R.S., Landecker, T.L., Spangler, S.R., Cordes, J.M., Dickey, J.M. **103**, 370

Spectral and Polarization Characteristics of the Supernova Remnant CTA 1

Sieber, W., Salter, C.J., Mayer, C.J. **103**, 393

A New Analysis of the Pulsar Distribution in the Galaxy

Morini, M. **104**, 75

Further Observations of Radio Sources from the BG Survey. I. The Non-thermal Sources near $l=94^{\circ}$

Mantovani, F., Nanni, M., Salter, C.J., Tomasi, P. **105**, 176

The Radio Morphology of Supernova Remnants

Shaver, P.A. **105**, 306

G33.2-0.6, an Old Supernova Remnant with a Spectral Break

Reich, W. **106**, 314

The Schweizer-Middleditch Star: Not a Stellar Remnant of SN1006

Savedoff, M.P., Van Horn, H.M. **107**, L3

A Continuum Study of Galactic Radio Sources in the Constellation of Monoceros

Graham, D.A., Haslam, C.G.T., Salter, C.J., Wilson, W.E. **109**, 145

The Effects of Non-equilibrium Ionization on the X-ray Emission of Supernova Remnants

Gronenschild, E.H.B.M., Mewe, R. **110**, 180; **48**, 305

Dynamics of the Supergiant Shell LMC 2 in the Large Magellanic Cloud

Caulet, A., Deharveng, L., Georgelin, Y.M., Georgelin, Y.P. **110**, 185

[Ni II] Emission Under Nebular Conditions

Nussbaumer, H., Storey, P.J. **110**, 295

X-ray and UV-emission from Supernova Shock Waves in Stellar Winds

Fransson, C. **111**, 140

Absolute Photometry of Supernova Remnants and Emission Nebulae in the Galaxy and the Magellanic Clouds

Greve, A., van Genderen, A.M., Dennefeld, M., Danziger, I.J. **111**, 171

Reddening Relations of the *VBLUW* and *UBV* Systems for Objects with Emission Line Spectra

Greve, A., van Genderen, A.M. **111**, 185

Redshifts of Parent Galaxies of Supernovae

Barbon, R., Capaccioli, M., West, R.M., Barbier, R. **111**, 210; **49**, 73

The Structure of Cosmic Ray Shocks

Axford, W.I., Leer, E., McKenzie, J.F. **111**, 317

Anticenter High Velocity H I Stream (Weaver Jet) and Colliding H I Shells

Watanabe, T. **111**, 333

Supernova Remnants and Bell's Acceleration Mechanism

Cavallo, G. **111**, 368

Neutral Hydrogen Associated with Southern Supernova Remnants. II. Lupus Loop

Colomb, F.R., Dubner, G. **112**, 141

A Spectrophotometric Study of Kepler Supernova Remnant

Dennefeld, M. **112**, 215

Mean-field Calculations of the Equation of State of Supernova Matter II

Bonche, P., Vautherin, D. **112**, 268

A Distinct Shell Structure in H I-line Emission at Intermediate Galactic Latitudes

Velden, L., Hirth, W. **113**, 340

Gravitational Radiation from Collapsing Rotating Stellar Cores

Müller, E. **114**, 53

Spectrophotometry of Wolf-Rayet Star Candidates in M 33

Wampler, E.J. **114**, 165

Spectra of SN 1980k in NGC 6946

Barbieri, C., Bonoli, C., Cristiani, S. **114**, 216

Kinematics of Ring-shaped Nebulae in the LMC. II. The Radial Velocity Field of N 185

Rosado, M., Georgelin, Y.M., Georgelin, Y.P., Laval, A., Monnet, G. **115**, 61

Soft X-ray Filter Spectroscopy of the Supernova Remnants Vela X and Puppis A

Burkert, W., Zimmermann, H.U., Aschenbach, B., Bräuninger, H., Williamson, F. **115**, 167

The Galactic Abundance Gradient from Supernova Remnant Observations

Binette, L., Dopita, M.A., D'Odorico, S., Benvenuti, P. **115**, 315
Radio Observations of Small Diameter Sources in the Field of the Supernova Remnant S147

Fürst, E., Reich, W., Beck, R., Hirth, W., Angerhofer, P.E. **115**, 428

Two Bright Supernovae in NGC 6946 and NGC 4536

Barbon, R., Ciatti, F., Rosino, L. **116**, 35

Spectra and Light Curves of Three Recent Supernovae

Barbon, R., Ciatti, F., Rosino, L., Ortolani, S., Rafanelli, P. **116**, 43

Solid white dwarfs, neutron stars and type I supernovae

Labay, J., Canal, R., Isern, J. **117**, L1

Pulsar statistics and two types of pulsars

Huang, J.-H., Huang, K.-L., Peng, Q.-H. **117**, 205

The binary model for type I supernovae: theoretical rates

Greggio, L., Renzini, A. **118**, 217

Further radio observations of the supernova remnant in NGC 4449 and a candidate remnant in NGC 4656

de Bruyn, A.G. **119**, 301

Diameter distribution and Σ -D relation of SNRs in M 31 and in M 33

Berkhuijsen, E.M. **120**, 147

The Crab Nebula. I. Photoionization models of a bright filament

Péquignot, D., Dennefeld, M. **120**, 249

Supernova shell structure and the spur of the Crab

Kundt, W. **121**, L15

Observations of the iron emission lines in the X-ray spectrum of the supernova remnant Cassiopeia A

Manzo, G., Peacock, A., Taylor, B.G., Andresen, R.D., Culhane, J.L., Catura, R.C. **122**, 124

Onion-shell model of cosmic ray acceleration in supernova remnants

Bogdan, T.J., Völk, H.J. **122**, 129

Freezing of a carbon-oxygen white dwarf

Mochkovitch, R. **122**, 212

Possible supernova remnant associated with pulsar PSR 1930+22

Gómez-González, J., del Romero, A. **123**, L5

BG 1937+21: an extended radio source towards the millisecond Pulsar PSR 1937+21

Mantovani, F., Panagia, N., Tomasi, P. **123**, 347

The H₂O/OH maser 342.01+0.25: a case of supernova-induced star formation?

Sandell, G., Scalise Jr, E., Braz, M.A. **124**, 139

Medium size radio continuum loops and their association with H I shells

Sofue, Y., Nakai, N. **124**, 152; 53, 57

Cosmic ray acceleration in supernova blast waves

Moraal, H., Axford, W.I. **125**, 204

The maximum energy of cosmic rays accelerated by supernova shocks

Lagage, P.O., Cesarsky, C.J. **125**, 249

Estimated energy and momentum input to the interstellar medium for several external galaxies

Tarrab, I. **125**, 308

Do filaments form at the time of Supernova explosions?

Bandiera, R., Pacini, F., Salvati, M. **126**, 7

Detection of an extended soft X-ray source H 2326-79 in the southern sky

Agrawal, P.C., Riegler, G.R., Singh, K.P. **126**, 70

Stellar collapse, pulsars, and globular clusters

Katz, J.I. **128**, L1

Pre-maximum spectra of the supernova in NGC 5236

Richtler, T., Sadler, E.M. **128**, L3

The interaction of supernova shockfronts and nearby interstellar clouds

Krebs, J., Hillebrandt, W. **128**, 411

Surveys

Survey of the Galactic Plane at 4.875 GHz

Altenhoff, W.J., Downes, D., Pauls, T., Schraml, J. **71**, 270; 35, 23

A Deep Objective Prism Survey of the Two Regions in the Large Magellanic Cloud for OB and Supergiant Stars

Davis Philip, A.G., Sanduleak, N. **72**, 379; 35, 347

A Catalogue of Sources Found at 610 MHz with the Westerbork Synthesis Radio Telescope: Source Counts and Spectral Index Distributions

Katbert, J.K. **73**, 107

A Systematic Search at 1612 MHz for OH Maser Sources. II. A Large-scale Survey between $10^\circ \leq l \leq 150^\circ$ and $b \leq 4^\circ 2'$

Baud, B., Habing, H.J., Matthews, H.E., Winnberg, A. **73**, 368; 36, 193

Optical Identification of the Radio Sources in the 3rd Westerbork Survey

Katbert, P., de Bruyn, A.G., Willis, A.G. **73**, 368; 36, 213

Westerbork Observations of Flat Spectrum Radio Galaxies in the 5 GHz "S4" Survey

Kapahi, V.K. **74**, L11

A Study of the 4C Catalogue of Radio Sources between Declinations 20° and 40° . I. 318 MHz Flux Density Measurements

Véron, M.P., Véron, P. **75**, 259; 36, 331

Investigation of Characteristic Curves in the ESO-(B)-Survey

Isserstedt, J., Wolf, B. **75**, 261; 36, 423

A 6 cm Source Survey with the Westerbork Synthesis Radio Telescope. II. Analysis

Willis, A.G., Miley, G.K. **76**, 65

A Survey of OH near the Galactic Plane

Turner, B.E. **76**, 132; 37, 1

A 6 cm Source Survey with the Westerbork Synthesis Radio Telescope I. The Data

Willis, A.G., Miley, G.K. **76**, 258; 37, 397

Survey of Neutral Hydrogen in the Galactic Center Region

Sinha, R.P. **76**, 258; 37, 403

Survey of the Optical Variability of Compact Extragalactic Objects. III. Objects from 23^h to 11^h

Barbieri, C., Romano, G., Zambon, M. **76**, 370; 37, 551

A Westerbork 1415 MHz Survey of Radio Sources. V. Spectrophotometric Observations of a Sample of the Stellar Identifications

Arp, H.C., De Ruiter, H.R., Willis, A.G. **77**, 86

A Westerbork Survey of Clusters of Galaxies. I. A 610 MHz Survey of Extended Radio Emission from 8 Abell Clusters

Valentijn, E.A. **80**, 329; 38, 319

A Survey of High-latitude Regions at Balloon Ultraviolet Wavelengths

Laget, M. **81**, 37

A Search for Faint Blue Stars in High Galactic Latitudes. II. Fourteen PSS Fields at Declinations $+6^\circ$ and 0° near the South Galactic Pole

Berger, J., Fringant, A.-M. **81**, 388; 39, 39

The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky. VII

Holmberg, E.B., Lauberts, A., Schuster, H.E., West, R.M. **82**, 394; 39, 173

Galaxies Near the Northern Galactic Plane

Weinberger, R. **84**, 270; **40**, 123

H₂O Masers - Survey of the Galactic Plane I

Scalise Jr, E., Braz, M.A. **85**, 149

A Study of the 4C Catalogue of Radio Sources, between Declinations 20° and 40°. II. The Sample

Véron, M.P., Véron, P. **85**, 265; **40**, 191

A Deep Survey of Selected Regions for Extragalactic Sources at 4.85 GHz

Pauliny-Toth, I.I.K., Steppe, H., Witzel, A. **85**, 329

A Search for Planetary Nebulae on the "POSS"

Dengel, J., Hartl, H., Weinberger, R. **85**, 356

An Optical and Radio Survey of the Nuclei of Bright Galaxies: Sample Selection and Observations

Heckman, T.M., Balick, B., Crane, P.C. **86**, 267; **40**, 295

An Optical and Radio Survey of the Nuclei of Bright Galaxies. Stellar Populations and Normal H II Regions

Heckman, T.M. **87**, 142

An Optical and Radio Survey of the Nuclei of Bright Galaxies. Activity in Normal Galactic Nuclei

Heckman, T.M. **87**, 152

Observations at 408-MHz of Sources in the ±4° Declination Strip of the Parkes 2700-MHz Survey

Grueff, G., Macacaro, T., Wall, J.V. **87**, 252; **41**, 21

A Radio Continuum Survey of Bright Galaxies at 1415 MHz

Hummel, E. **88**, 282; **41**, 151

A Westerbork Survey of Clusters of Galaxies. XIII. Deep 610 MHz Source Counts from the Cancer Cluster Field

Valentijn, E.A. **89**, 234

A Radio Survey of Clusters of Galaxies. III. 6.2 cm Observations, Radio Spectra and Optical Identifications of Sources in 29 Abell Clusters

Andernach, H., Waldthausen, H., Wielebinski, R. **89**, 252; **41**, 339

A Radio Continuum Survey at 1.4 GHz of the Galaxies in the Virgo Region

Kotanyi, C.G. **89**, 253; **41**, 421

A 21 cm Radio Continuum Survey of the Galactic Plane Between $l=93^\circ$ and $l=162^\circ$

Kallas, E., Reich, W. **91**, 381; **42**, 227

Radio Observations at 408 MHz of E and SO Nearby Galaxies

Feretti, L., Giovannini, G. **92**, 296

High Dynamic Range Observations in the Fields of Strong Extragalactic Radio Sources

Stute, U., Reich, W., Kalberla, P.M.W. **92**, 323; **42**, 299

Westerbork Observations of B2 Radio Sources in Abell Clusters of Galaxies

Harris, D.E., Lari, C., Vallée, J.P., Wilson, A.S. **92**, 324; **42**, 319

Search for (Globular) Clusters in M 31. I.: Candidates in a 70' Square Field Centered on M 31

Battistini, P., Bonoli, F., Braccisi, A., Fusi Pecci, F., Malagnini, M.L., Marano, B. **92**, 325; **42**, 357

New Galactic Sources in the BG Catalogue: Search at 1.4 GHz with the Westerbork Synthesis Radiotelescope

Fanti, C., Mantovani, F., Tomasi, P. **95**, 208; **43**, 1

A 4850 MHz Survey of the 5C 6 Area

Maslowski, J., Pauliny-Toth, I.I.K., Witzel, A., Kühr, H. **95**, 285

The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky - VIII

Lauberts, A., Holmberg, E.B., Schuster, H.-E., West, R.M. **97**, 415; **43**, 307

Infrared Survey of Southern Galactic Maser Sources in the Longitude Range 320° to 30°

Epchtein, N., Lépine, J.R.D. **99**, 210

A Spectroscopic Survey of Emission-line Objects in Two Fields

Kunth, D., Sargent, W.L.W., Kowal, C. **99**, 403; **44**, 229

A 408 MHz All-sky Continuum Survey. I. Observations at Southern Declinations and for the North Polar Region

Haslam, C.G.T., Klein, U., Salter, C.J., Stoffel, H., Wilson, W.E., Cleary, M.N., Cooke, D.J., Thomasson, P. **100**, 209

Small Nebulae and Herbig-Haro Objects. I. A Survey of Southern Dark Clouds

Reipurth, B. **100**, 333; **44**, 379

Discoveries on Southern, Red Sensitive Objective-prism Plates III: New Stars Having H α in Emission

MacConnell, D.J. **100**, 333; **44**, 387

A 1415 MHz Survey of Seyfert and Related Galaxies - II

Meurs, E.J.A., Wilson, A.S. **101**, 419; **45**, 99

A Southern Atlas of Galactic Hydrogen. III. The Regions $320^\circ \leq l \leq 345^\circ$, $+18^\circ \leq b \leq +26^\circ$ and $346^\circ \leq l \leq 350^\circ$, $+18^\circ \leq b \leq +20^\circ$.

Olano, C.A., Pöppel, W.G.L., Vieira, E.R. **103**, 208; **46**, 41

Photographic Polarization Survey with a Savart Plate

Röser, H.-J. **103**, 374

The ESO/Uppsala Survey of the ESO (B) Atlas of the Southern Sky. IX

Lauberts, A., Holmberg, E.B., Schuster, H.-E., West, R.M. **104**, 172; **46**, 311

A 408 MHz All-sky Continuum Survey. II. The Atlas of Contour Maps

Haslam, C.G.T., Salter, C.J., Stoffel, H., Wilson, W.E. **106**, 181; **47**, 1

Far Infrared Survey of Extended Molecular Clouds H II Regions Complexes Along the Galactic Plane

Gispert, R., Puget, J.L., Serra, G. **106**, 293

H₂O Masers - Survey of the Galactic Plane. II

Braz, M.A., Scalise, E. Jr. **107**, 272

A Westerbork Survey of Clusters of Galaxies. XIV. Abell 779 and Abell 1314

Wilson, A.S., Vallée, J.P. **107**, 416; **47**, 601

Results of a Radio Survey for New Compact H II Regions

Wink, J.E., Altenhoff, W.J., Mezger, P.G. **108**, 227

Quasars in a Control Field Far from Bright Galaxies

Arp, H., Surdej, J. **109**, 101

Automatic Image Classification

Butchins, S.A. **109**, 360

A Radio Continuum Survey of the Northern Sky at 1420 MHz - Part I

Reich, W. **110**, 180; **48**, 219

The Physical Nature of the Blue Objects in the Field of 88 Leonis

Erculiani Abati, L. **110**, 180; **48**, 333

Discoveries on Southern, Red-sensitive Objective-prism Plates. IV. Extension to Higher Latitudes

MacConnell, D.J. **110**, 181; **48**, 355

Telescope Beam Characteristics and Temperature Scale of the Maryland-Green Bank 21-cm Line Survey

Westerhout, G., Mader, G.L., Harten, R.H. **111**, 212; **49**, 137

The Maryland-Green Bank Galactic 21-cm Line Survey

Westerhout, G., Wendlandt, H.-U. **111**, 212; **49**, 143

The ESO Quick Blue Survey and ESO (B) Atlas

West, R.M., Schuster, H.-E. **112**, 180; **49**, 577

The South West Extension of the Perseus Supercluster

Focardi, P., Marano, B., Vettolani, G. **113**, 15

- Radio Measurements in the Fields of Gamma-ray Sources. I. CG 195+04
Sieber, W., Schlickeiser, R. **113**, 314
- Infrared Observations of OH/IR Stars
Willems, F., de Jong, T. **115**, 213
- A 1415 MHz Survey of Seyfert and Related Galaxies. III
Wilson, A.S., Meurs, E.J.A. **115**, 217; **50**, 217
- A radio continuum survey of M 31 at 4850 MHz. I. Observations; list of sources
Berkhuijsen, E.M., Wielebinski, R., Beck, R. **117**, 141
- Neutral hydrogen observations towards the Puppis Window of the Milky Way
Stacy, J.G., Jackson, P.D. **117**, 171; **50**, 377
- An H I survey of southern galaxies
Reif, K., Mebold, U., Goss, W.M., van Woerden, H., Siegmán, B. **117**, 172; **50**, 451
- An optimal procedure for non-parametric elimination of observational cutoff bias in complete samples
Nicoll, J.F., Segal, I.E. **118**, 180
- Photographic surface photometry of the Milky Way. I. Data and reduction methods (text in German)
Schmidt-Kaler, T., Seidensticker, K.J., Pröll, H.J., Schlosser, W., Beck, R. **118**, 206; **51**, 1
- A two-micron survey of southern Herbig-Haro objects
Reipurth, B., Wamsteker, W. **119**, 14
- WSRT radio observations at 1.4 GHz of 32 Abell clusters of distance class 3 and 4
Fanti, C., Fanti, R., Feretti, L., Gioia, I.M., Giovannini, G., Gregorini, L., Padrielli, L., Parma, P., Tomasi, P., Marano, B. **119**, 163; **51**, 179
- Symbiotic Stars**, see also Binary Stars
- New Observations of HM Sge and V 1016 Cyg: Simultaneous Presence of Increasing Excitation and Cool Features
Ciatti, F., Mammano, A., Vittone, A. **79**, 247
- Symbiotic Stars - Evolutionary Considerations
Paczyski, B., Rudak, B. **82**, 349
- Spectroscopic Observations of CH Cygni in 1977-1979
Faraggiana, R. **84**, 366
- Spectrophotometric Observations of CI Cyg in 1979
Iijima, T. **94**, 290
- Is RX Puppis Returning to a Symbiotic Phase?
Klut, M., Swings, J.P. **96**, 406
- HM Sagittae: Symbiotic Cousin of the RS CVn Stars?
Blair, W.P., Stencel, R.E., Shaviv, G., Feibelman, W.A. **99**, 73
- O III: Intercombination and Forbidden Lines
Nussbaumer, H., Storey, P.J. **99**, 177
- A Model for V 1016 Cyg Based on the Ultraviolet Spectrum
Nussbaumer, H., Schild, H. **101**, 118
- The Symbiotic Star CI Cygni: S-process Episode or Accretion Event?
Kenyon, S.J., Webbink, R.F., Gallagher, J.S., Truran, J.W. **106**, 109
- The Ultraviolet Spectrum of CH Cygni During the Outburst Started in 1977
Hack, M., Selvelli, P.L. **107**, 200
- A Brightening of the Symbiotic Variable SY Muscae
Michalitsianos, A.G., Kafatos, M., Feibelman, W.A., Wallerstein, G. **109**, 136
- Radial Velocities of CH Cygni During the Outburst Started in 1977
Hack, M., Rusconi, L., Sedmak, G., Engin, S., Yilmaz, N. **113**, 250
- Interpretation of Line Profiles of the Symbiotic Star V 1016 Cyg
Kindl, C., Marxer, N., Nussbaumer, H. **116**, 265
- V 1016 Cygni and HM Sagittae: binary stellar systems
Taranova, O.G., Yudin, B.F. **117**, 209
- The symbiotic star CH Cyg: the occasional transition from an unstable to a stable accretion disk
Duschl, W.J. **119**, 248
- IUE observations of the high velocity symbiotic star AG Draconis during active phase
Viotti, R., Ricciardi, O., Ponz, D., Giangrande, A., Friedjung, M., Cassatella, A., Baratta, G.B., Altamore, A. **119**, 285
- HM Sge and V 1016 Cyg: spectroscopic changes in 1981-1982
Ciatti, F., Vittone, A. **122**, 343
- Observations of an emission nebula associated with the carbon star UV Aur
Reimers, D., Groote, D. **123**, 257
- The ultraviolet variability of the symbiotic star HBV 475
Nussbaumer, H., Schmutz, W. **126**, 59
- Evidence for a warm wind from the red star in symbiotic binaries
Friedjung, M., Stencel, R.E., Viotti, R. **126**, 407
- Synchrotron Radiation**, see also Magnetohydrodynamics
- Compton and Synchrotron Processes in Spherically-symmetric Nonthermal Sources
Gould, R.J. **76**, 306
- Synchrotron Radiation in Inhomogeneous Magnetic Field
Cavallo, G., Horstman, H.M., Muracchini, A. **86**, 36
- Two-dimensional Maps of the Sun at 408 MHz
Palagi, F., Patriarchi, P. **87**, 254; **41**, 129
- Spectral and Angular Distribution of Synchro-compton Radiation in a Linearly Polarized Vacuum Wave of Arbitrary Intensity
Leubner, C. **96**, 373
- Distribution of Galactic Synchrotron Emission. I
Phillipps, S., Kearsey, S., Osborne, J.L., Haslam, C.G.T., Stofel, H. **98**, 286
- Distribution of Galactic Synchrotron Emission. II
Phillipps, S., Kearsey, S., Osborne, J.L., Haslam, C.G.T., Stofel, H. **103**, 405
- On the Interpretation of Optically Thin Synchrotron Spectra
Pineault, S. **114**, 177
- Absolute Photometry of the Crab Nebula
Greve, A., van Genderen, A.M. **115**, 79
- Relativistic coherent curvature radiation
Benford, G., Buschauer, R. **118**, 358
- Lorentz factor of particles emitting in pulsars
Gil, J. **123**, 7
- M 33. II. A comparison of radio and optical data
Berkhuijsen, E.M. **127**, 395
- A model for BL Lac-type low frequency variables
Salvati, M., Fanti, R. **128**, 165
- The extended component of the radio continuum radiation from the Cassiopeia-Perseus region
Kallas, E., Reich, W., Haslam, C.G.T. **128**, 268
- T Tauri Stars**, see also Herbig-Haro Objects, Pre-Main-Sequence Stars, YY Orionis Stars
- The Far-UV Spectrum of the T Tauri Star RU Lupi
Gahm, G.F., Fredga, K., Liseau, R., Dravins, D. **73**, L4
- UBV Photometry of T Tauri Stars and Related Objects
Bastian, U., Mundt, R. **73**, 365; **36**, 57
- Are there Two Classes of T Tauri Stars?
Mundt, R., Bastian, U. **75**, L14

- Radial Velocities of Emission and Absorption Lines in the Spectrum of the Unusual T Tauri Star V 1331 Cyg
Chavarría, C., Appenzeller, I., Bertout, C. **75**, 262; **36**, 465
- Short Term Variations in the Spectrum of the T Tauri Star DI Cep
Bastian, U., Mundt, R. **78**, 181
- UBV Photometry of Young Emission-line Objects
Kundt, R., Bastian, U. **82**, 394; **39**, 245
- A Scheme of Atmospheric Regions. III. Chromospheres of Emission-line Stars: I. Formation of H α Emission Line Cores in T Tauri-type Stars
Heidmann, N., Thomas, R.N. **87**, 36
- Surprising DR Tauri
Krautter, J., Bastian, U. **88**, L6
- UV Spectrograms of T Tauri Stars
Appenzeller, I., Chavarría, C., Krautter, J., Mundt, R., Wolf, B. **90**, 184
- A Low-luminosity Far Infrared Source in the L 1551 Molecular Cloud
Fridlund, C.V.M., Nordh, H.L., van Duinen, R.J., Aalders, J.W.G., Sargent, A.I. **91**, L1
- IUE Observations of V 1331 Cyg
Mundt, R., Appenzeller, I., Bertout, C., Chavarría, C., Krautter, J. **93**, 412
- A Search for H₂O Emission from Orion Population Stars
Thum, C., Bertout, C., Downes, D. **94**, 80
- The Wavelength Dependence of Linear Polarization in T Tauri Stars
Bastien, P. **94**, 294
- A Study of the Peculiar T Tauri Star V 1331 Cygni
Chavarría, C.K. **101**, 105
- H₂O Masers in the Direction of Southern Nebular Objects
Scalise Jr., E., Gahm, G.F., Sandell, G. **104**, 166
- YY Orionis Line Profiles in the Spectrum of RW Aurigae
Appenzeller, I., Wolf, B. **105**, 313
- On the Absence of Coronal Line Emission from Orion Population Stars
Gahm, G.F., Krautter, J. **106**, 25
- Radio Emission from Young Stars
Felli, M., Gahm, G.F., Harten, R.H., Liseau, R., Panagia, N. **107**, 354
- Radio Observations of Pre-main-sequence Stars: Results and Interpretation
Bertout, C., Thum, C. **107**, 368
- A Linear Polarization Survey of T Tauri Stars
Bastien, P. **108**, 417; **48**, 153
- On the Discrepancy Between the Optical and Radio Position of T Tauri
de Vegt, C. **109**, L15
- The short-term spectral variability of the T Tauri star RW Aur
Appenzeller, I., Östreicher, R., Schiffer, J.G., Egge, K.E., Petersen, B.R. **118**, 75
- Spectral line profiles from spherical shells
Wagenblast, R., Bertout, C., Bastian, U. **120**, 6
- Linear polarization variations of six T Tauri stars
Schulte-Ladbeck, R. **120**, 203
- TW Hya: a T Tauri star far from any dark cloud
Rucinski, S.M., Krautter, J. **121**, 217
- Photometry of the post T Tauri star HD 36705
Rucinski, S.M. **121**, 330; **52**, 281
- Spectroscopy and infrared photometry of southern T Tauri stars
Appenzeller, I., Jankovics, I., Krautter, J. **125**, 177; **53**, 291
- On the T Tauri nature of the variable star BM Cha
Krautter, J., Mouchet, M. **125**, 378
- The definition of T Tauri and Herbig Ae/Be stars
Bastian, U., Finkenzeller, U., Jaschek, C., Jaschek, M. **126**, 438
- Telescopes, see Instruments, Radio Telescopes
- Thomson Scattering, see Scattering
- Three Body Problems, see also N-body Problems
- Periodic Orbits of Second Genus in a Two Dimensional Coordinate System in the Generalized Circular Restricted Three Body Problem
Ishwar, B. **71**, 40
- On the Isosceles Triangle Configuration in the Planar General Three-body Problem
Broucke, R. **73**, 303
- A Contribution to the Three-dimensional Copenhagen Problem
Michalodimitrakis, M. **76**, 6
- A Development of the Jacobian Integral in the Elliptic Three Body Problem
Delva, M., Dvorak, R. **77**, 252
- Applications to Stellar Dynamics of a One-parameter Family of Triple Close Approaches
Szebehely, V. **78**, 349
- Three-body Problem: The Existence of Families of Three-dimensional Periodic Orbits which Bifurcate from Planar Periodic Orbits
Ichtiaroglou, S., Michalodimitrakis, M. **81**, 30
- Families of Vertical Critical Orbits of the Planar General Three-body Problem
Ichtiaroglou, S. **81**, 88
- General Three-body Problem: Families of Three-dimensional Periodic Orbits (Part I)
Michalodimitrakis, M. **81**, 113
- Long-period Effects in the Motion of Eighteen Trojan Asteroids and the Investigation of Special Problems of the 1/1 Resonance
Bien, R. **81**, 255
- Analysis of the Neighbourhood of Triple Collisions and of Tri-parabolic Escapes in the 3 Body-problem
Marchal, C., Losco, L. **84**, 1
- Erratum: Eine Reihenentwicklung des Jacobi Integrals im elliptischen Dreikörperproblem
Delva, M., Dvorak, R. **84**, 383
- New *u*-type Families of Periodic Orbits in the Restricted Three-body Problem
Zikides, M.K. **88**, 298
- The Family *ilv* of the Three-dimensional General Three-body Problem
Katopodis, K., Ichtiaroglou, S., Michalodimitrakis, M. **90**, 102
- Restricted Problem: Families of Vertical Critical Periodic Orbits
Ichtiaroglou, S., Katopodis, K., Michalodimitrakis, M. **90**, 324
- Elliptic Hill's Problem: The Continuation of Periodic Orbits
Ichtiaroglou, S. **92**, 139
- The Families C 1 V and M 2 V of the Three-dimensional General Three-body Problem
Michalodimitrakis, M. **93**, 212
- Elliptic Hill Problem: Families of Periodic Orbits
Ichtiaroglou, S. **98**, 401
- Horseshoe Periodic Orbits in the Restricted Problem of Three Bodies for a Sun-Jupiter Mass Ratio
Taylor, D.B. **103**, 288
- Studies of the Stellar Three-body Problem
Söderhjelm, S. **107**, 54

On the Stability of the Triangular Points in the Elliptic Restricted Problem

Meire, R. **110**, 152

Method for Constructing Periodic Orbits (Text in French)

Edelman, C. **111**, 220

A Manifold of Periodic Orbits in the Planar General Three-body Problem with Equal Masses

Davoust, E., Broucke, R. **112**, 305

Tides

Luni Solar Nutation Tables and the Liquid Core of the Earth

Melchior, P. **87**, 365

Tidal Evolution in Close Binary Systems

Hut, P. **99**, 126

On the Linear Adiabatic Oscillations of a Uniformly and Synchronously Rotating Component of a Binary

Martens, L., Smeyers, P. **106**, 317

Tidal Evolution in Close Binary Systems for High Eccentricity

Hut, P. **110**, 37

On the Origin of Low Mass Cataclysmic Binaries

Livio, M. **112**, 190

Erratum: Tidal Evolution in Close Binary Systems for High Eccentricity

Hut, P. **116**, 351

Roche's limit in a galaxy. II. The effects of rotation

Robe, H. **120**, 215

Rotation and tidal interactions in BY Draconis binaries

Edwards, D.A. **123**, 316

Time Observations

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1977

Buffoni, L., Chlistovsky, F., Manara, A., Mazzoleni, F. **72**, 379; **35**, 345

Determination of the Ephemeris Time Correction from Photographic Observations of the Annular Eclipse of the Sun on April 29, 1976

Schroll, A., Lustig, G. **73**, 193

Results of Observations Made at Valinhos with the Astrolabe. Time and Latitude 1974 to 1977

Benevides, P., Boczek, R., Clauzet, L.B.F., Leister, N.V. **75**, 260; **36**, 401

Results of Observations Made at Paris with the Astrolabe Time and Latitude 1977-1978

Chollet, F., Débarbat, S. **76**, 368; **37**, 477

Results of Observations Made with the Astrolabe of Santiago from 1972 to 1976

Noël, F. **81**, 389; **39**, 89

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1978

Buffoni, L., Chlistovsky, F., Manara, A., Mazzoleni, F. **91**, 379; **42**, 177

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1979

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **99**, 204; **44**, 97

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1980

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **104**, 169; **46**, 179

The New Definition of Universal Time

Aoki, S., Guinot, B., Kaplan, G.H., Kinoshita, H., McCarthy, D.D., Seidelmann, P.K. **105**, 359

Danjon Astrolabe Observations at Rio de Janeiro: Time and Latitude

Andrei, A.H., d'Ávila, V.A., Penna, J.L., Queiroz, M. **110**, 183; **48**, 485

Time and Latitude Results of Observations Made at Merate Observatory with the Astrolabe for the Year 1981

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **112**, 179; **49**, 509

Results of Observations Made in Paris with the Astrolabe (Text in French)

Chollet, F., Débarbat, S., Hascoët, J.C., Lam, S.K., Texier, P., Tomas, M. **115**, 217; **50**, 195

Short-period geomagnetic, atmospheric and Earth-rotation variations

Djurović, D. **118**, 26

Results of observations made with the Astrolabe of Santiago from 1977 to 1980

Noël, F. **119**, 164; **51**, 219

Star transits with a photoelectric micrometer applied to the transit instrument of Torino Observatory

Anderlucci, E., Chiumiento, G., Fracastoro, M.G., Iervolino, R. **121**, 142

Corrections for the gravitational deflection of light in the case of observations with an astrolabe

Li, Z.X. **123**, 22

Time and latitude results of observations made at Merate Observatory with the astrolabe for the year 1982

Buffoni, L., Carta, F., Chlistovsky, F., Manara, A., Mazzoleni, F. **124**, 152; **53**, 43

Transition Probabilities

Interstellar Carbon I Lines in ζ Puppis and ζ Ophiuchi

de Boer, K.S., Morton, D.C. **71**, 141

Forbidden Transitions in the C I Sequence

Nussbaumer, H., Rusca, C. **72**, 129

Transition Probabilities for N IV, O V, F VI, NE VII, and F V

Nussbaumer, H., Storey, P.J. **74**, 244

Transitions in A-Doublets of Molecules Induced by Collisions with Ions. II.

Bouloy, D., Omont, A. **77**, 373; **38**, 101

Transition Probabilities for Singly Ionized Chromium Lines

Musielok, J., Wujec, T. **77**, 373; **38**, 119

Optical Oscillator Strengths for some Astrophysically Interesting Lines in O III

Ganas, P.S. **80**, 329; **38**, 313

Oscillator Strengths of Fe II Lines Derived from the Solar Spectrum: Choice of Solar Model Atmosphere

Blackwell, D.E., Shallis, M.J., Simmons, G.J. **81**, 340

The Oscillator Strengths and the Dissociation Energy of SiH^+ as Determined from Time Resolved Precision Spectroscopy

Carlson, T.A., Copley, J., Durić, N., Elander, N., Erman, P., Larsson, M., Lyyra, M. **83**, 238

The Hydroxyl Ion in Interstellar Clouds

Singh, P.D., de Almeida, A.A. **84**, 177

On the Absolute Oscillator Strength of Hg II 3984 Å and the Presence of Hg Ions in Ap Stars

Dworetsky, M.M. **84**, 350

Oscillator Strengths of Ultraviolet Ni I Lines from Hook-Method and Absorption Measurements in a Furnace

Huber, M.C.E., Sandeman, R.J. **86**, 95

A Solar Abundance of Nickel Independent of Line Broadening Parameters

Biémont, E., Grevesse, N., Huber, M.C.E., Sandeman, R.J. **87**, 242

Atomic Structure Calculations: Energy Levels and Oscillator Strengths for 3s-3p and 3p-3d Transitions in Nickel XII to XV and Vanadium VII to X Spectra

Bromage, G.E. **87**, 253; **41**, 79

Atomic Data for Fe II

Nussbaumer, H., Storey, P.J. **89**, 308

Absolute Transition Probabilities of Neutral Titanium Lines

Holys, A., Fuhr, J.R. **90**, 14

Some Consequences of Sr, Y, and Zr gf Values Calculation

Pirronello, V., Strazzulla, G. **93**, 411

Non-LTE Calculations of N II Line Strengths in B-Type Stars

Dufton, P.L., Hibbert, A. **95**, 24

Absolute Transition Probabilities in the Spectra of Eu I and Eu II. I. Lifetime Measurements

Meyer, G., Ruland, W., Sahm, A., zu Putlitz, G. **95**, 278

The OH⁺ Molecule in Interstellar Clouds Absolute Oscillator Strengths and Equivalent-widths for OH⁺ ($A^3\Pi^-X^3\Sigma^-$) Bands

de Almeida, A.A., Singh, P.D. **95**, 383

C II Two-electron Transitions

Nussbaumer, H., Storey, P.J. **96**, 91

O III: Intercombination and Forbidden Lines

Nussbaumer, H., Storey, P.J. **99**, 177

Autoionized Levels and Oscillator Strengths for Si II

Artru, M.C., Jamar, C., Petrini, D., Praderie, F. **99**, 401; **44**, 171

On the Establishment of Internally Consistent Solar Scales of Oscillator Strengths and Abundances of Chemical Elements. II. On the Errors of the Oscillator Strengths of Fe I Lines in the Kurucz-Peytremann gf-scale

Gurtovenko, E.A., Kostik, R.I. **101**, 132

Sextet Transitions in Fe II

Nussbaumer, H., Pettini, M., Storey, P.J. **102**, 351

Lifetime Measurements in Cr I by Laser Excitation from Metastable States

Kwiatkowski, M., Micali, G., Werner, K., Zimmermann, P. **103**, 108

f-Values for Isoelectronic Ions of Carbon

Ganas, P.S. **103**, 209; **46**, 101

On the Establishment of Internally Consistent Solar Scales of Oscillator Strengths and Abundances of Chemical Elements. I. Oscillator Strengths for 865 Fe I Lines Iron Abundance

Gurtovenko, E.A., Kostik, R.I. **104**, 170; **46**, 239

On the Establishment of Internally Consistent Solar Scales of Oscillator Strengths and Abundances of Chemical Elements. III. Oscillator Strengths Obtained from Equivalent Widths of 360 Fe I Lines

Gurtovenko, E.A., Kostik, R.I. **106**, 378; **47**, 193

Absolute Transition Probabilities in the Spectra of Eu I and Eu II. II. Line Intensity Measurements

Karner, C., Meyer, G., Träger, F., zu Putlitz, G. **107**, 161

The Collision Strength for the N III λ 1750 Transition

Nussbaumer, H., Storey, P.J. **109**, 271

Vibration-rotation transition probabilities for the ground electronic X¹ Σ^+ state of HD

Abgrall, H., Roueff, E., Viala, Y. **117**, 172; **50**, 505

On the errors of the Kurucz-Peytremann Fe I oscillator strengths

Irwin, A.W. **117**, 173

Arc measurements of Fe II transition probabilities

Moity, J. **121**, 163; **52**, 37

Branching ratios in the vacuum ultraviolet spectrum of neutral carbon

Tozzi, G.P., Huber, M.C.E., Pauls, U. **126**, 320

Conversion formulas between radiative lifetimes and other dynamical variables for spin-allowed electronic transitions in diatomic molecules

Larsson, M. **128**, 291

Transition Zone, see Solar Corona, Stellar Occultations

Theoretical Network Structure of the Transition Region Chromosphere - Corona. I. The Quiet Sun

Elzner, L.R., Elwert, G. **86**, 181

Theoretical Network Structure of the Transition Region Chromosphere - Corona. II. The Coronal Holes

Elzner, L.R., Elwert, G. **86**, 188

The Energy Balance of the Solar Transition Region

Jordan, C. **86**, 355

The Interpretation of C V and O VII Emission Line Ratios in the Sun

Doyle, J.G. **87**, 183

Proton Excitation Rates for Fine Structure Transitions in C III, O V, and Ne VII in the Sun

Doyle, J.G., Kingston, A.E., Reid, R.H.G. **90**, 97

Solar Emission Lines Produced in the Wake of a Shock Wave. I. The Thermodynamic Cycle

Flower, D.R., Pineau des Forêts, G. **93**, 347

The Transition Region Structure of κ Ceti

Fernández-Figueroa, M.J., de Castro, E., Rego, M. **99**, 141

Transition Region Structure in F Dwarfs

Saxner, M. **104**, 240

On the Theory of Thermally Sustained Stellar Winds

Souffrin, P. **106**, 14

On the Search for Transition Zone Lines in Late A Type Stars

Crivellari, L., Praderie, F. **107**, 75

Dynamics of a surge observed in the C IV and H α lines

Schmieder, B., Vial, J.-C., Mein, P., Tandberg-Hanssen, E. **127**, 337

Trigonometric Parallaxes

Comparison Between Geneva Photometric Boxes and MK Spectral Types Through Trigonometric Parallaxes

Crézé, M., Turon, Lacarrieu, C., Golay, M., Mandwewala, N. **85**, 311

Triple Stars, see Multiple Stars

Studies of the Stellar Three-body Problem

Söderhjelm, S. **107**, 54

Turbulence, see also Convection

The Effect of Waves on Spectral Line Analysis

Durrant, C.J. **73**, 137

Turbulent Diffusion in Stars and the (¹²C/¹³C) Abundance Ratio

Genova, F., Schatzman, E. **78**, 323

On the Rotation Measure and Turbulent Structure of the Vela Supernova Remnant

Lerche, I., Milne, D.K. **81**, 302

Properties of Magnetohydrodynamic Turbulence in the Solar Wind

Dobrowolny, M., Mangeney, A., Veltri, P. **83**, 26

Turbulent Bremsstrahlung of Langmuir Waves

Kuipers, J. **83**, 201

Observational Tests of the Cosmic Turbulence Theory

Danese, L., De Zotti, G. **87**, 303

Microturbulence Near the Edge of a Solar Plage

Simon, G., Dumont, S., Mouradian, Z., Pecker, J.C., Artzner, G., Vial, J.C. **89**, L8

Some More Effects of Waves on Spectral Line Analysis

Durrant, C.J. **89**, 80

Strong Langmuir Wave Turbulence: Some Results with Self-consistent Landau Damping

van Grunsven, T.F.J., Hoyng, P., Nicholson, D.R. **91**, 7

Impulsive Electron Acceleration to Energies of Tens of kT_e by Langmuir Wave Turbulence

Hoyng, P., Duijveman, A., van Grunsven, T.F.J., Nicholson, D.R. **91**, 17

Broadening of Non-LTE Lines by a Turbulent Velocity Field with a Finite Correlation Length

Froeschlé, Ch., Frisch, H. **91**, 202

Stellar Evolution with Turbulent Diffusion Mixing. III. The Solar Model and the Neutrino Problem

Schatzman, E., Maeder, A., Angrand, F., Glowinski, R. **96**, 1

Determination of Microturbulent Velocities in Early-type Stars

Dufton, P.L., Durrant, A.C., Durrant, C.J. **97**, 10

Metal Abundance and Microturbulence in F0-G2 Stars and the Calibration of the Strömgren m_1 Index

Nissen, P.E. **97**, 145

Epsilon Eridani: Active Chromosphere Associated with Enhanced Microturbulence

Steenbock, W., Holweger, H. **99**, 192

Alfvenic Fluctuations as Asymptotic States of MHD Turbulence

Grappin, R., Frisch, U., Léorat, J., Pouquet, A. **105**, 6

Lower Atmosphere and Solar Seeing: an Experiment of Simultaneous Measurements of Nearby Turbulence by Thermal Radiosondes, by Angle of Arrival Statistics and Image Motion Observation

Borgnino, J., Ceppatelli, G., Ricort, G., Righini, A. **107**, 333

Model Chromospheres of RS CVn Stars: Balmer Line Profiles in λ Andromedae

Mullan, D.J., Cram, L.E. **108**, 251

Turbulence Variations for the Three Cepheids SV Vul, X Cyg, and δ Cep

Benz, W., Mayor, M. **111**, 224

Line Profile Fluctuations in a Turbulent Atmosphere

Loucif, M.L., Magnan, C. **112**, 287

On the influence of the " α -turbulence" on the energy transport in accretion disks

Duschl, W.J. **121**, 153

Solar wind observations near the Sun using interplanetary scintillation

Scott, S.L., Coles, W.A., Bourgois, G. **123**, 207

Dependence of MHD turbulence spectra on the velocity field-magnetic field correlation

Grappin, R., Pouquet, A., Léorat, J. **126**, 51

A determination of the electron density fluctuation spectrum in the solar wind, using the ISEE propagation experiment

Celnikier, L.M., Harvey, C.C., Jegou, R., Kemp, M., Moricet, P. **126**, 293

Spatial energy spectra of the velocity and magnetic fields in solar active regions

Berton, R. **127**, 140

Twenty-one-cm Line, see Radio Frequency Lines: 21-cm Line

U Geminorum Stars

Discovery of Ca II Absorption at 1840 Å in the IUE Spectra of Two Helium-rich White Dwarfs

Koester, D., Vauclair, G., Weidemann, V., Zeidler-K.T., E.M. **113**, L13

UBV Photometry, see Clusters (globular and open), Magnitudes, Photometry

The short-term spectral variability of the T Tauri star RW Aur

Appenzeller, I., Östreicher, R., Schiffer, J.G., Egge, K.E., Petersen, B.R. **118**, 75

Universe, see Cosmology

Baryon Number Creation and Phase Transitions in the Early Universe

Hut, P., Klinkhamer, F.R. **106**, 245

A Possible Large-scale Anisotropy of the Universe

Fliche, H.H., Souriau, J.M., Triay, R. **108**, 256

Uranus

Observations of Uranus Made with the Danjon Astrolabe of Santiago, Chile, during 1977

Noël, F., Contreras, K., Repetur, H. **73**, 370; **36**, 307

The Effects of Seeing on the Reflected Spectrum of Uranus and Neptune

Münch, G., Hippelein, H. **81**, 189

Astrometric Study of the Uranus Satellite Miranda

Veillet, C., Ratier, G. **89**, 342

Observations of Uranus Made with the Danjon Astrolabe of Santiago, Chile, During 1978

Noël, F., Contreras, K., Repetur, H. **91**, 380; **42**, 193

The Sun among the Stars. IV. Albedos of Uranus and Neptune and the Solar Color

Hardorp, J. **96**, 123

New Determination of the Orbit of Miranda

Veillet, Chr. **98**, 218

Observations of Uranus Made with the Danjon Astrolabe of Santiago, Chile, During 1979

Noël, F., Barros, S. **107**, 413; **47**, 481

1980-81 observations of Miranda: new orbit and mass of Ariel and Umbriel

Veillet, C. **118**, 211

A determination of the masses of Saturn and Uranus from the motion of the minor planets (944) Hidalgo and (2060) Chiron (text in German)

Landgraf, W. **119**, 95

UV Ceti Stars, see Flare Stars

UV Radiation, see also under the different Objects

Spectral Classification from the Ultraviolet Line Features of S 2/68 Spectra. IV. Late-type Stars

Cucchiari, A., Macau-Hercot, D., Jaschek, M., Jaschek, C. **71**, 270; **35**, 75

Rocket Photometry of Ultraviolet Galactic Light

Pitz, E., Leinert, C., Schulz, A., Link, H. **72**, 92

The Ultraviolet Spectrum of the Hot Halo Star Feige 86

Hack, M. **74**, L4

C III Observable with IUE

Nussbaumer, H., Schild, H. **75**, L17

Far Ultraviolet Photometry of Intermediate Brightness Stars from Apollo-Soyuz

Crawford, R., Margon, B., Paresee, F., Lampton, M., Bowyer, S. **75**, 260; **36**, 371

The Effective Temperatures of the O-Stars

Pottasch, S.R., Wesseliuss, P.R., Van Duinen, R.J. **77**, 189

Observations of the Mid-ultraviolet Spectrum of 138 Early Type Stars

Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **78**, 250; **38**, 227

EUV Limb Spectra of a Surge Observed from Skylab

Doschek, G.A., Feldman, U., Mason, H.E. **78**, 342

Ultraviolet P Cygni Profiles of the C IV Resonance Line for O-type Stars in the Open Cluster IC 1805

Burki, G., Llorente de Andrés, F. **79**, L13

Ultraviolet Photometry with the Astronomical Netherlands Satellite (ANS). Observation of β Canis Majoris Variables

Lesh, J.R., Wesseliuss, P.R. **79**, 115

"Normal" Early Type Stars with an Anomalous Mid-ultraviolet Spectrum

Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **79**, 230

The N III and O IV Intersystem Multiplets as Density Indicators for Solar Plasmas

Feldman, U., Doschek, G.A. **79**, 357

Interstellar Absorption of the Extreme Ultraviolet Flux from Two Hot White Dwarfs

Cash, W., Bowyer, S., Lampton, M. **80**, 67

Line Blocking in the Near Ultraviolet Spectrum of Early Type Stars II. The Dependence on Spectral Type and Luminosity for Normal Stars

Llorente de Andrés, F., Lamers, H.J.G.L.M., Müller, E.A. **80**, 330; **38**, 367

The Ultraviolet High-resolution Spectrum of Feige 86

Hack, M. **81**, L1

Copernicus Observations of Neutral Helium Lines in Early-type Stars

Dufton, P.L., McKeith, C.D. **81**, 8

A Survey of High-latitude Regions at Balloon Ultraviolet Wavelengths

Laget, M. **81**, 37

On the Extragalactic Nature of the Far-ultraviolet Background

Jakobsen, P. **81**, 66

Circumstellar Absorption Lines in the Ultraviolet Spectrum of α Scorpii (M1.5 Iab + B2.5 V)

van der Hucht, K.A., Bernat, A.P., Kondo, Y. **82**, 14

Observations of the Mid-ultraviolet Spectrum of Peculiar A and B Stars and of Be Stars, Bn Stars, and Shell Stars

Lamers, H.J.G.L.M., Faraggiana, R., Burger, M. **82**, 48

Analysis of the Far-ultraviolet Silicon Lines in G Dwarf

Fernandez-Figueroa, M.J., Rego, M., Cornide, M. **82**, 221

The Far-ultraviolet Spectrum of κ Cet Observed from IUE

Rego, M., Cornide, M., Fernández-Figueroa, M.J. **82**, 395; **39**, 251

Point Source Contributions to the Extreme Ultraviolet Background

Stern, R., Bowyer, S. **83**, L1

Ultraviolet Observations of β CMa Stars: List of Basic Data Obtained with the TD-1A Satellite

Burger, M., Beeckmans, F., Kamperman, T.M. **83**, 383; **39**, 301

Photometric Calibration of the International Ultraviolet Explorer (IUE): Low Dispersion

Bohlin, R.C., Holm, A.V., Savage, B.D., Snijders, M.A.J., Sparks, W.M. **85**, 1

Ultraviolet Colours of Main-sequence Stars

Wesseliuss, P.R., van Duinen, R.J., Aalders, J.W.G., Kester, D. **85**, 221

Spectral Classification from the Ultraviolet Line Features of S2/68 Spectra. V. Supplement Series

Cucchiari, A., Jaschek, M., Jaschek, C., Macau-Hercot, D. **85**, 266; **40**, 207

Observations of the Interstellar Ultraviolet Radiation Field from the S2/68 Sky-survey Telescope

Göndhalekar, P.M., Phillips, A.P., Wilson, R. **85**, 272

A Sample of New Hot Subluminous Stars Taken from the List of Ultraviolet Objects Detected by the S2/68 Sky Survey Experiment

Berger, J., Fringant, A.-M. **85**, 367

Charge Transfer $C + H^+ = C^+ + H$ and the $C\text{I} \lambda 1101$ Absorption Edge in A Stars

Che, A., Baschek, B. **86**, L7

Ultraviolet Studies of the Magellanic Clouds. I. Observations

Maucherat-Joubert, M., Lequeux, J., Rocca-Volmerange, B. **86**, 299

A UV Image of M 31

Deharveng, J.M., Jakobsen, P., Milliard, B., Laget, M. **88**, 52

The Nature of the UV Radiation Background

Maucherat-Joubert, M., Deharveng, J.M., Cruvellier, P. **88**, 323

The Ultraviolet Absorption by the Photoionisation Spectrum of Fe I in Ap Stars

Jamar, C. **89**, 22

The Ultraviolet Flux of HD 122563

Gustafsson, B., Bell, R.A., Fredga, K., Gahr, G.F. **89**, 255

On the UV Classification of the Am Stars

Jaschek, M., Jaschek, C., Cucchiari, A. **89**, 380

The Ultraviolet Spectrum of β Canis Majoris Stars

Burger, M., de Jager, C., Kamperman, T.M., Neven, L. **90**, 170

UV Spectrograms of T Tauri Stars

Appenzeller, I., Chavarria, C., Krautter, J., Mundt, R., Wolf, B. **90**, 184

A Comparison Between the Observed and Predicted UV Line Blocking for Blanketed Model Atmospheres of Early Type Stars

Castelli, F., Lamers, H.J.G.L.M., Llorente de Andrés, F., Müller, E.A. **91**, 32

Comparison of Solar Backscatter and Interstellar Absorption Measurements of the ISM

Meier, R.R. **91**, 62

Ground-Based Observations of Some Stars Classified in the Satellite Ultraviolet with Spectral Particularities

Jaschek, M., Jaschek, C. **91**, 263; **42**, 115

Studies of Ultraviolet Interstellar Extinction with the Sky-survey Telescope of the TD-1 Satellite. Results for Different OB-Associations

Morales, C., Llorente de Andrés, F., Ruiz del Arbol, J.A., Pérez Mollá, J. **91**, 379; **42**, 155

HR 4453: An Anomalous Bright UV Source?

Polidan, R.S., Oegerle, W.R., Margon, B. **92**, 212

Solar H I Ly α Far Wing Measurement

Jouchoux, A., Vial, J.C., Artzner, G.E., Gouttebroze, P., Lemaire, P. **93**, 415

Interstellar Hot Plasma Contributions to the Diffuse Ultraviolet Background

Jakobsen, P., Paresce, F. **96**, 23

Far UV Study on the Non-thermal Activity in the Narrow Line Galaxies NGC 4507 and NGC 5506

Bergeron, J., Maccacaro, T., Perola, C. **97**, 94

Bolometric Corrections of Silicon Stars

North, P. **97**, 359

Latitudinal Anisotropy of the Solar Far Ultraviolet Flux: Effect on the L_z Sky Background

Cook, J.W., Meier, R.R., Brueckner, G.E., Van Hoosier, M.E. **97, 394**

UV and Optical Observations of X-ray Sources in the Magellanic Clouds

Tarengi, M., Tanzi, E.G., Treves, A., Glencross, W.M., Howarth, I.D., Hammerschlag-Hensberge, G., Van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., Whitelock, P.A. **97, 415; 43, 353**

Ultraviolet Extinction in the Small Magellanic Cloud

Rocca-Volmerange, B., Prévot, L., Ferlet, R., Lequeux, J., Prévot-Burnichon, M.L. **99, L5**

On the Ultraviolet Extinction in the Galactic Plane

Kester, D. **99, 375**

UV Observations of the New BL Lac Object 0716+71

Fricke, K.J., Kollatschny, W., Schleicher, H. **100, 1**

Ultraviolet Observations of 27 Canis Majoris, π Aquarii and 48 Librae

Ringuet, A.E., Fontenla, J.M., Rovira, M. **100, 79**

Discovery of Strong Ultraviolet Absorption in the Spectrum of the DC White Dwarf G 33-49

Vauclair, G., Weidemann, V., Koester, D. **100, 113**

Ultraviolet Intrinsic Colours of Early Type Stars

Llorente de Andrés, F., Morales, C., Ruiz del Arbol, J.A., Pérez Mollá, J. **100, 138**

Far-UV Wind Line Profile Changes in the O-type Star HD 175754

Carrasco, L., Costero, R., Stalio, R. **100, 183**

A Model for V 1016 Cyg Based on the Ultraviolet Spectrum

Nussbaumer, H., Schild, H. **101, 118**

Ultraviolet Observations of LMC X-4 and SMC X-1

Bonnet-Bidaud, J.M., Ilovaisky, S.A., Mouchet, M., Hammerschlag-Hensberge, G., van der Klis, M., Glencross, W.M., Willis, A.J. **101, 184**

Variability of the Continuum and the Emission Lines in the Seyfert 1 Galaxy Akn 120

Kollatschny, W., Fricke, K.J., Schleicher, H., Yorke, H.W. **102, L23**

The Ultraviolet Spectrum of the X-ray Source 2A0526-33

Mouchet, M., Bonnet-Bidaud, J.M., Ilovaisky, S.A., Chevalier, C. **102, 31**

Analysis of the Far Ultraviolet Emission Lines in Late Type Stars

de Castro, E., Fernández-Figueroa, M.J., Rego, M., Ponz, D. **102, 207**

A High Resolution IUE Spectrum of the GO-G 5 Ia Supergiant HR 8752

Stickland, D.J., Lambert, D.L. **102, 296**

Ultraviolet Colours of Early-type Stars

Barbier, R. **102, 307**

IUE Spectroscopy of Cataclysmic Variables

Krautter, J., Klare, G., Wolf, B., Duerbeck, H.W., Rahe, J., Vogt, N., Wargau, W. **102, 337**

Ultraviolet Observations of Two Extreme Population II Stars: Detection of Chromospheric Emission and Mass Loss

Spite, M., Caloi, V., Spite, F. **103, L11**

Atomic Calculation for Fe XXIII, UV, and X-ray Lines

Bhatia, A.K., Mason, H.E. **103, 324**

The Line Spectrum of Fe II Seyfert 1 Galaxy Akn 120

Kollatschny, W., Schleicher, H., Fricke, K.J., Yorke, H.W. **104, 198**

Transition Region Structure in F Dwarfs

Saxner, M. **104, 240**

Diagnostic of Coronal Heating Processes Based on the Emission Measure of UV Lines

Torricelli-Ciamponi, G., Einaudi, G., Chiuderi, C. **105, L1**
Hot Stars in the Bulge of M 31: Upper Limit to the Star Formation Rate

Deharveng, J.M., Joubert, M., Monnet, G., Donas, J. **106, 16**
On the Ionization and Velocity Structure of Expanding Circumstellar Envelopes

Drechsel, H., Rahe, J. **106, 70**

The Variable Shell Star HR 5999. VI. Strong Chromospheric and Transition Region Emission Lines in the Ultraviolet Spectrum of a Herbig Ae Star

Tjin A Djie, H.R.E., Thé, P.S., Hack, M., Selvelli, P.L. **106, 98**
An Alternative Procedure for Extracting IUE Low Resolution Spectra

Crivellari, L., Morossi, C. **106, 332**

A Study of Ultraviolet Spectroscopic and Light Variations in the X-ray Binaries LMC X-4 and SMC X-1

van der Klis, M., Hammerschlag-Hensberge, G., Bonnet-Bidaud, J.M., Ilovaisky, S.A., Mouchet, M., Glencross, W.M., Willis, A.J., van Paradijs, J., Zuiderwijk, E.J., Chevalier, C. **106, 339**

The Correlation Between Diffuse Far Ultraviolet Background and Line of Sight Hydrogen Column: Dust Scattering and H₂ Fluorescence

Jakobsen, P. **106, 375**

IUE Ultraviolet Spectrophotometry of 15 Galactic Wolf-Rayet Stars

Nussbaumer, H., Schmutz, W., Smith, L.J., Willis, A.J. **106, 379; 47, 257**

The Spectra of Late-type Dwarfs and Sub-dwarfs in the Near Ultraviolet. I. Line Identifications

Beckman, J.E., Crivellari, L., Selvelli, P.L. **106, 380; 47, 295**

Picture Gallery: A Structured Presentation of OAO-2 Photometric Data Supported by OAO-2 Spectrophotometric Data and UBV, ANS and TD1 Observations

Koornneef, J., Meade, M.R., Wesselius, P.R., Code, A.D., van Duinen, R.J. **106, 381; 47, 341**

IUE Data Reduction. The Parameterization of the Motion of the IUE Reseau Grids and Spectral Formats as a Function of Time and Temperature

Thompson, R.W., Turnrose, B.E., Bohlin, R.C. **107, 11**
On Excitation Through Radiative Pumping of the Fe II UV-Mult. 191 $\lambda\lambda$ 1785-88 Å Observed with IUE during the Eclipse of 32 Cyg

Hempe, K., Reimers, D. **107, 36**

Mass Loss Rates in the Open Cluster IC 1805

Llorente de Andrés, F., Burki, G., Ruiz del Arbol, J.A. **107, 43**
On the Search for Transition Zone Lines in Late A Type Stars

Crivellari, L., Praderie, F. **107, 75**

The Ultraviolet Spectrum of CH Cygni During the Outburst Started in 1977

Hack, M., Selvelli, P.L. **107, 200**

Variability and Mass Loss in the Extreme Supergiant ζ^1 Sco

Burki, G., Heck, A., Bianchi, L., Cassatella, A. **107, 205**

Detection of Further Red Giants with "Hybrid" Atmospheres and a Possible Correlation with Double Circumstellar Mg II and Ca II Lines

Reimers, D. **107, 292**

The Pulsation of the Outer Layers of the Beta Cephei-type Variable BW Vul

Burger, M., de Jager, C., van den Oord, G.H.J., Sato, N. **107, 320**

Mg II *h* and *k* Line Observations of Delta Scuti Variables

Fraccini, M., Pasinetti, L.E. **107, 326**

- UV and Visible Photometry of the Brightest Pleiades Stars
Golay, M., Maurom, N. **107**, 415; **47**, 547
- UV Photometric Data on Standard A, F and Am Stars Observed by S2/68
Van't Veer-Menneret, C., Faraggiana, R., Burkhart, C., Oberto, Y. **107**, 416; **47**, 595
- Chromospheric Effects of XUV Radiation Emitted During Solar Flares
Machado, M.E., Hénoux, J.C. **108**, 61
- Analysis of the IUE and Optical Spectra of the Peculiar Be Star HD 87643
de Freitas Pacheco, J.A., Gilra, D.P., Pottasch, S.R. **108**, 111
- The Ultraviolet Spectrum of the Old Novae HR Del, GK Per, RR Pic, and RS Oph
Rosino, L., Bianchini, A., Rafanelli, P. **108**, 243
- Stellar Wind in the Nucleus of IC 2149
Perinotto, M., Benvenuti, P., Cerruti-Sola, M. **108**, 314
- Spectral Analysis of the OB Subdwarf HD 149 382
Baschek, B., Kudritzki, R.P., Scholz, M., Simon, K.P. **108**, 387
- A Brightening of the Symbiotic Variable SY Muscae
Michalitsianos, A.G., Kafatos, M., Feibelman, W.A., Wallerstein, G. **109**, 136
- Contribution of the Warm Intercloud Medium to the Diffuse Ultraviolet Background
Deharveng, J.M., Joubert, M., Barge, P. **109**, 179
- UV, Optical and IR Observations of the Cepheid R Muscae
Eichendorf, W., Heck, A., Caccin, B., Russo, G., Sollazzo, C. **109**, 274
- The Pulsation of the Outer Layers of the Beta Cephei Star σ Sco
Burger, M., de Jager, C., van den Oord, G.H.J. **109**, 289
- Magnetic Structure in Cool Stars. V. Chromospheric and Transition-region Emission from Giants
Oranje, B.J., Zwaan, C., Middelkoop, F. **110**, 30
- The Interacting Early-type Contact Binary SV Centauri
Drechsel, H., Rahe, J., Wargau, W., Wolf, B. **110**, 246
- New Evidence of Strong UV Radiation in TT Ari
Wargau, W., Drechsel, H., Rahe, J., Vogt, N. **110**, 281
- On the Structure of the Outer Layers of Cool Carbon Stars
Querci, F., Querci, M., Wing, R.F., Cassatella, A., Heck, A. **111**, 120
- Rocket Photographs of Fine Structure and Wave Patterns in the Solar Temperature Minimum
Bonnet, R.M., Bruner, M., Acton, L.W., Decaudin, M., Foing, B. **111**, 125
- X-ray and UV-emission from Supernova Shock Waves in Stellar Winds
Fransson, C. **111**, 140
- A Search for Medium Z Elements in the Ultraviolet Spectrum of κ Cancri
Davidson, J.P., Bord, D.J. **111**, 362
- The OB Subdwarf Feige 66, a Chemical-composition Twin to HD 149382
Baschek, B., Höflich, P., Scholz, M. **112**, 76
- ANS Ultraviolet Photometry, Catalogue of Point Sources
Wesselius, P.R., Van Duinen, R.J., de Jonge, A.R.W., Aalders, J.W.G., Luinge, W., Wildeman, K.J. **112**, 178; **49**, 427
- The Ultraviolet Spectrum of KQ Puppis (Boss 1985)
Altamore, A., Giangrande, A., Viotti, R. **112**, 179; **49**, 511
- On the Linearity of the SWP Camera of the International Ultraviolet Explorer (IUE): A Correction Algorithm
Holm, A., Bohlin, R.C., Cassatella, A., Ponz, D.P., Schiffer, F.H. **112**, 341
- First Ultraviolet Observations of Two New Cataclysmic Variables 1 E0643-1648 and 4 U1849-31
Bonnet-Bidaud, J.M., Mouchet, M., Motch, C. **112**, 355
- Discovery of Ca II Absorption at 1840 Å in the IUE Spectra of Two Helium-rich White Dwarfs
Koester, D., Vauclair, G., Weidemann, V., Zeidler-K.T., E.M. **113**, L13
- Sk 143: An SMC Star with a Galactic-type Ultraviolet Interstellar Extinction
Lequeux, J., Maurice, E., Prévot-Burnichon, M.-L., Prévot, L., Rocca-Volmerange, B. **113**, L15
- IUE Observations of Dwarf Novae During Active Phases
Klare, G., Krautter, J., Wolf, B., Stahl, O., Vogt, N., Wargau, W., Rahe, J. **113**, 76
- The Outer Atmosphere Structure of Three Late Type Stars
de Castro, E., Fernández-Figueroa, M.J., Rego, M. **113**, 94
- Observed and Computed UV Spectral Distribution of A and F Stars. Determination of T_e and $\log g$
Malagnini, M.L., Faraggiana, R., Morossi, C., Crivellari, L. **114**, 170
- The UV Spectrum of the Old Nova HR Del at Different Orbital Phases
Friedjung, M., Andriolat, Y., Puget, P. **114**, 351
- The Visible and Ultraviolet Continuum from a Herbig-Haro Object in the Core of M 16 (NGC 6611)
Meaburn, J. **114**, 367
- The Width of Echelle Orders in IUE Images as Derived with the Astronomical Image Display and Analysis (AIDA) System in Tübingen
de Boer, K.S., Preussner, P.-R., Grewing, M. **115**, 128
- The Mid-ultraviolet Spectrum of ϵ Aurigae
Castelli, F., Hoekstra, R., Kondo, Y. **115**, 217; **50**, 233
- Absolute Ultraviolet Fluxes of Elliptical Galaxies as Observed with the Astronomical Netherlands Satellite (ANS)
de Boer, K.S. **115**, 218; **50**, 247
- Chromospheric Mg II Emission in A5 to K5 Main Sequence Stars from High Resolution IUE Spectra
Blanco, C., Bruca, L., Catalano, S., Marilli, E. **115**, 280
- Measurements of Solar Transition Zone Velocities and Line Broadening Using the Ultraviolet Spectrometer and Polarimeter on the Solar Maximum Mission
Simon, G., Mein, P., Vial, J.C., Shine, R.A., Woodgate, B.E. **115**, 367
- The Far-UV Spectrum of the Low-excitation Planetary Nebula HD 138403
Surdej, J., Heck, A. **116**, 80
- Atmospheric Parameters and Carbon Abundance of White Dwarfs of Spectral Types C₂ and DC
Koester, D., Weidemann, V., Zeidler-K.T., E.-M. **116**, 147
- Interpretation of Line Profiles of the Symbiotic Star V 1016 Cyg
Kindl, C., Marxer, N., Nussbaumer, H. **116**, 265
- Mass Loss from Extreme Helium Stars. Detailed UV-line Fits for HD 160641, BD -9°4395 and BD +10°2179
Hamann, W.-R., Schönberner, D., Heber, U. **116**, 273
- Ultraviolet Spectrum of the Sky Background at Different Galactic Latitudes
Zvereva, A.M., Severny, A.B., Granitzky, L.V., Hua, C.T., Crivellari, P., Courtès, G. **116**, 312
- Ultraviolet and visible photometric parameters for the Am stars
Nicolet, B., Cramer, N. **117**, 248
- Spectral fine analysis of the extreme helium star BD +10°2179
Heber, U. **118**, 39

- On the stellar content of the galactic globular cluster M5
Altamore, A., Angeletti, L., Capuzzo-Dolcetta, R., Giannone, P. **118**, 332
- The composite UV emission spectrum of Seyfert 1 galaxies
Véron-Cetty, M.-P., Véron, P., Tarengi, M. **119**, 69
- Evidence for outburst in the shell star 17 Lep derived from ultraviolet spectra
Molaro, P., Morossi, C., Ramella, M. **119**, 160
- The relationship between soft X-rays and the 1640 Å feature fluxes in late-type stars
Rego, M., Gonzalez-Riestra, R., Fernandez-Figueroa, M.J. **119**, 227
- Emissions from the transition regions and coronae of three cool dwarf stars
Fernández-Figueroa, M.J., de Castro, E., Rego, M. **119**, 243
- IUE observations of the high velocity symbiotic star AG Draconis during active phase
Viotti, R., Ricciardi, O., Ponz, D., Giangrande, A., Friedjung, M., Cassatella, A., Baratta, G.B., Altamore, A. **119**, 285
- Detection of a late B star companion of the bright cluster giant c Pup = HD 63032
Groote, D., Reimers, D. **119**, 319
- The ultraviolet spectrum of the supermassive object R 136 a. I. The mass loss rate
Feitzinger, J.V., Hanuschik, R.W., Schmidt-Kaler, T. **120**, 269
- Helium cyclotron emission from accreting magnetized neutron stars
Apparao, K.M.V., Chitre, S.M. **121**, L1
- OSO-8 observations of a quiescent prominence: a comparison of Lyman- α with theoretical intensities
Heinzel, P., Vial, J.-C. **121**, 155
- Atomic calculations for Ca XVII; UV and X-ray lines
Bhatia, A.K., Mason, H.E. **121**, 163; **52**, 115
- The spectra of late type dwarfs and sub-dwarfs in the near ultraviolet. II. Limits to variability in Mg II emission from IUE spectrophotometry
Crivellari, L., Franco, M.L., Molaro, P., Vladilo, G., Beckman, J.E. **121**, 164; **52**, 135
- Envelope structure of the cyclic V/R variable shell stars
Hubert-Delplace, A.M., Mon, M., Ungerer, V., Hirata, R., Paterson-Beekmans, F., Hubert, H., Baade, D. **121**, 174
- IUE observations of the nucleus of the galactic globular cluster NGC 2808
Caloi, V., Castellani, V. **121**, 198
- An ultraviolet approach to M 15
Nesci, R. **121**, 226
- Predicted and observed UV spectrum of M 5
Nesci, R. **121**, 325
- A search for UV-line profile variability in five O-stars
Franco, M.L., Kontizas, E., Kontizas, M., Stalio, R. **122**, 9
- IUE spectrophotometry of X Persei (4U 0352 + 30)
Bernacca, P.L., Bianchi, L., Dorren, J.D., Perryman, M.A.C. **122**, 17
- Hydrogen line ratios of low redshift QSO's
Kollatschny, W., Fricke, K.J. **122**, 33
- IUE observations of high velocity interstellar gas tentatively associated with Radio Loop II
Bates, B., Brown-Kerr, W., Giaretta, D.L., Keenan, F.P. **122**, 64
- Intrinsic UV colour indices of early-type stars
Gatecki, Z., Graczyk, M., Janaszak, E., Kołos, R., Kretowski, J., Strobel, A. **122**, 207
- Profiles and intensity ratios of the CIV λ 1548, 1550 emission lines in planetary nebulae
Feibelman, W.A. **122**, 335
- Ultraviolet observations of AR Lacertae
Kızıloğlu, Ü., Derman, E., Ögelman, H., Tokdemir, F. **123**, 17
- The strength of the CIV 1550 Å resonance lines in planetary nebulae
Köppen, J., Wehrse, R. **123**, 67
- Evidence of hourly variations in the deuterium Lyman line profiles toward ϵ Persei
Gry, C., Laurent, C., Vidal-Madjar, A. **124**, 99
- Mass and energy balance in the 1973 August 9 flare
Dere, K.P., Cook, J.W. **124**, 181
- Far ultraviolet observations of the expanding shell in Eridanus
Paresce, F., Jakobsen, P., Bowyer, S. **124**, 300
- Quasi-simultaneous ultraviolet and optical observations of PKS 2155-304 = H 2155-304
Maraschi, L., Tanzi, E.G., Tarengi, M., Treves, A. **125**, 117
- Diffuse light near Zeta Orionis and the Horsehead nebula, and anomalous extinction of HD 37903, as measured with the ANS
de Boer, K.S. **125**, 258
- The dust envelope of the Herbig Ae star, AB Aur
Catala, C. **125**, 313
- The ultraviolet variability of the symbiotic star HBV 475
Nussbaumer, H., Schmutz, W. **126**, 59
- The BUSS spectrum of β Lyrae
Hack, M., Sahade, J., de Jager, C., Kondo, Y. **126**, 115
- Far ultraviolet colors of B and Be stars
Zorec, J., Briot, D., Divan, L. **126**, 192
- Far ultraviolet colors of β Cephei stars
Zorec, J., Briot, D., Divan, L. **126**, 205
- Branching ratios in the vacuum ultraviolet spectrum of neutral carbon
Tozzi, G.P., Huber, M.C.E., Pauls, U. **126**, 320
- High resolution ultra-violet observations of alpha Lyrae using the University College London balloon-borne telescope system
Welsh, B.Y., Boksenberg, A., Anderson, B., Towlson, W.A. **126**, 335
- Evidence for a warm wind from the red star in symbiotic binaries
Friedjung, M., Stencel, R.E., Viotti, R. **126**, 407
- The LMC emission line star S 22 (=HD 34664). III. Ultraviolet to infrared energy distribution
Bensammar, S., Friedjung, M., Muratorio, G., Viotti, R. **126**, 427
- Superionization in the A0 V star HD 119921
Molaro, P., Morossi, C., Ramella, M., Franco, M. **127**, L3
- Period-activity relations in close binaries
Vilhu, O., Rucinski, S.M. **127**, 5
- Quasi-simultaneous optical and UV observations of OJ 287 during an active period in 1983
Maraschi, L., Tanzi, E.G., Treves, A., Falomo, R. **127**, L17
- Boss 1985: mass loss investigation based on IUE spectra
Che, A., Reimers, D. **127**, 227
- A comparison of UV extinction in Sco OB2 and Per OB1 associations
Krelowski, J., Strobel, A. **127**, 271
- IUE observations of the eclipsing binaries TV Cas and YZ Cas
de Landtsheer, A.C., Mulder, P.S. **127**, 297
- Investigation of IUE spectra of the Cp star ET And (HD 219749)
Barylak, M., Rakos, K.D. **127**, 366
- UV background radiation, dust and gas at high galactic latitude
Joubert, M., Masnou, J.L., Lequeux, J., Deharveng, J.M., Cruwellier, P. **128**, 114

The UV spectrum of PKS 2251 + 113 and physical conditions in the Broad Line Region

Dultzin-Hacyan, D. **128**, 148

A spectroscopic method for calibration of solar extreme ultraviolet instrumentation

Neupert, W.M., Kastner, S.O. **128**, 181

Ultraviolet carbon lines in the spectrum of the white dwarf BPM 11668

Wegner, G. **128**, 258

UV and visible spectrophotometry of nine LMC Wolf-Rayet stars

Smith, L.J., Willis, A.J. **128**, 261; **54**, 229

The distance, temperature, and luminosity of the hypergiant P Cygni (B1 Ia⁺)

Lamers, H.J.G.L.M., de Groot, M., Cassatella, A. **128**, 299

High rotational velocity of a region around the primary of Algol

Cugier, H., Molaro, P. **128**, 429

Variable Stars, see also Beta Cephei Stars, Beta Canis Majoris Stars, Cataclysmic Variables, Cepheids, Delta Scuti Stars, Eclipsing Binaries, Flare Stars, Mira Stars, P Cygni Stars, R. Coronae Borealis Stars, RR Lyrae Stars, RV Tauri Stars, Spectrum Variables, Symbiotic Stars, T Tauri Stars, VV Cephei Stars, W Ursae Majoris Stars, YY Orionis Stars

Optical Light Curve of the X-ray Binary 4 U 1538-52

Ilovaisky, S.A., Chevalier, C., Motch, C. **71**, L17

New OH Sources in CRL Objects and Late Type Stars. On the Correlation of OH Velocity Pattern and Stellar Period

Le Squeren, A.M., Baudry, A., Bizillet, J., Darchy, B. **72**, 39

Analysis of Rapid Variations in the Spectra of α Col by Cross Correlation

Bijaoui, A., Doazan, V. **73**, 285

Photoelectric Observations of the Peculiar Variable V 389 Cygni

Giesekeing, F. **73**, 365; **36**, 37

The Amplitude Extension and the Amplitudes Limit of Red Variables

Celis, S.L. **74**, 146

Optical Light Curve of the X-ray Binary 4 U 1538-52

Ilovaisky, S.A., Chevalier, C., Motch, C. **75**, 258

Photoelectric Photometry of the RRs-Variable GP And

Giesekeing, F., Hoffmann, M., Nelles, B. **75**, 261; **36**, 457

V 3955 Sgr a New Field RV Tauri/SRd Variable

Alvarez, H. **76**, 336

Is the 1612 MHz Flare of U Orionis Related to Its Light Curve?

Garrigue, J.P., Mennessier, M.O. **81**, L13

Spectroscopic and Photometric Investigations of a Helium-rich Variable

Westin, B.A.M. **81**, 74

Accuracy of the Maximum Entropy Method

Strauss, F.M. **81**, 344

UBV Photometry of V 616 Mon (A 0620-00)

Chevalier, C., Janot-Pacheco, E., Mauder, H., Ilovaisky, S.A. **81**, 368

Photometry of HZ Herculis in 1978

Mazeh, T. **82**, 260

Photoelectric Observations of the Variable Star AU Monocerotis

Lorenzi, L. **85**, 267; **40**, 271

Mathematical Analysis of Some Photometric Peculiarities of AU Monocerotis

Lorenzi, L. **85**, 342

On the Period Determination of Variable Stars

Renson, P. **92**, 30

IUE Observations of Two Late Type Stars: R Aql and W Hya

Kafatos, M., Michalitsianos, A.G., Hobbs, R.W. **92**, 320

uwyß Photometry of Equatorial and Southern Bright Stars II

Heck, A., Manfroid, J. **92**, 324; **42**, 311

A Spectroscopic Study of CI Cygni: The S-process Episode

Audouze, J., Bouchet, P., Fehrenbach, Ch., Wosczyck, A. **93**, 1

Minimum of Light Curves from a Spline-smoothing Technique

Picchio, G. **94**, 52

A Catalogue of Variable-visual Binary Stars

Proust, D., Ochsenbein, F., Pettersen, B.R. **99**, 401; **44**, 179

Three Colour Observations of Southern Red Variable Giant Stars

Wisse, P.N.J. **99**, 403; **44**, 273

On the Nature of the Two Supergiant Components in the System of V 810 Cen = HR 4511 = HD 101947

van Genderen, A.M. **100**, 175

On the Physical Nature of Delta Delphini Stars

Saez, M., Auvergne, M., Valtier, J.-C., Baglin, A., Morel, P. **101**, 259

IUE and Ground-based Spectroscopic Observations of the S Dor-type LMC Variable R 71 during Minimum State

Wolf, B., Appenzeller, I., Stahl, O. **103**, 94

A Photoelectric Investigation of Light Variability in AP Stars

Hensberge, H., Maitzen, H.M., Deridder, G., Gerbaldi, M., Delmas, F., Renson, P., Doom, C., Weiss, W.W., Morguleff, N. **103**, 210; **46**, 151

The Symbiotic Star CI Cygni: S-process Episode or Accretion Event?

Kenyon, S.J., Webbink, R.F., Gallagher, J.S., Truran, J.W. **106**, 109

HR 4975: A Possible Early-Type Contact System with Unequal Components

Waelkens, C., Bartholdi, P. **108**, 51

Does 28 CMa Have a Photometric Period Differing from Its Spectroscopic Period?

Baade, D. **110**, L15

List of 333 Variable, Microvariable or Suspected Variable Stars Detected in the Geneva Photometry

Rufener, F., Bartholdi, P. **110**, 184; **48**, 503

The Detection of Compact Companions in OB-runaway Stars

Sybesma, C.H.B., de Loore, C. **111**, 229

A New Analysis of Light Variations in μ Cephei

Mantegazza, L. **111**, 295

Non-linear Stellar Oscillations. Two-Mode Interactions

Perdang, J., Blacher, S. **112**, 35

Further *VBLUW* Photometry of the S Doradus Type Variables S Dor and HDE 269006 in the LMC and a Discussion on Their Temperatures

van Genderen, A.M. **112**, 61

AG Car: A Galactic S Dor Variable

Wolf, B., Stahl, O. **112**, 111

New Variable Stars in the Direction of the Bright Cloud B in Sagittarius

Terzan, A., Bijaoui, A., Ju, K.H., Ounnas, C. **112**, 396; **49**, 715

Resonance effects in radial pulsators

Buchler, J.R. **118**, 163

Near infrared spectroscopy and infrared photometry of a new WC9 star

Danks, A.C., Dennefeld, M., Wamsteker, W., Shaver, P.A. **118**, 301

Short-period components in the relativistic radial velocities of SS 433 = V 1343 Aql

Mammano, A., Margoni, R., Ciatti, F., Cristiani, S. **119**, 153

Photometric observations of southern Ap stars with right ascensions close to 12 h (text in French)

Manfroid, J., Renson, P. **119**, 165; **51**, 267

- HD 129929: a multiperiodic pulsating early-type star at intermediate galactic latitude
Waelkens, C., Rufener, F. **119**, 279
- Multi-periodicity of the new variable B-type star HR 3562
Burki, G. **121**, 211
- A photometric classification of pulsating variables with periods between one and three days
Diethelm, R. **124**, 108
- Correlations and periodicities of equivalent widths in SS 433
Vittone, A., Rusconi, L., Sedmak, G., Mammano, A., Ciatti, F. **124**, 154; **53**, 109
- Notes on the heavily reddened and variable A-type supergiant CD-33° 12119
van Genderen, A.M., Hammerschlag-Hensberge, G., Thé, P.S. **124**, 197
- A search for rapid spectroscopic variability in the early-type supergiants γ and θ Ara
Baade, D. **124**, 211
- The intrinsic properties of 29 Cepheids in the Magellanic Clouds
van Genderen, A.M. **124**, 223
- Optical photometry of massive X-ray binaries: Cen X-3/V779 Cen
van Paradijs, J., Lub, J., Pel, J.W., Pakull, M., van Amerongen, S. **124**, 294
- Ultra high energy gamma rays from Cygnus X3
Dowthwaite, J.C., Gibson, A.I., Harrison, A.B., Kirkman, I.W., Lotts, A.P., Macrae, J.H., Orford, K.J., Turver, K.E., Walmsley, M. **126**, 1
- Study of the variability of the Delta Scuti stars. VII. The problem of stability and monop periodicity in 20 CVn
Bossi, M., Guerrero, G., Mantegazza, L., Scardia, M. **126**, 222; **53**, 399
- UBV photometry of the optical candidate for LMC X-3
van der Klis, M., Tjemkes, S., van Paradijs, J. **126**, 265
- Short-timescale IR variation of SS 433
Kodaira, K., Lenzen, R. **126**, 440
- Phase dispersion minimization period analysis of the β Cephei star β Crucis
Cuyper, J. **127**, 186
- On the rapid spectral variability of Be-stars: high spectral resolution study of γ Cas, ϕ Per, and 59 Cyg
Chalabaev, A., Maillard, J.P. **127**, 279
- Low state hard X-ray emission from A0535+26
Polcaro, V.F., Bazzano, A., La Padula, C., Ubertini, P., Manchanda, R.K. **127**, 333
- Investigation of IUE spectra of the Cp star ET And (HD 219749)
Barylak, M., Rakos, K.D. **127**, 366
- Variable stars: how accurate will be their astrometric measurements by HIPPARCOS?
Mennessier, M.O., Guibert, J. **128**, 69
- The long-term variations of γ Cas in the visual
Doazan, V., Franco, M., Rusconi, L., Sedmak, G., Stalio, R. **128**, 171
- Starspots in VW Cephei
Walter, K. **128**, 391
- Velocities**, see Radial Velocities, Space Motion
- The cluster of galaxies SC 0316-44. Does it rotate?
Materne, J., Hopp, U. **124**, L13
- The velocity field of the ionized gas in NGC 2903
Marcelin, M., Boulesteix, J., Georgelin, Y. **128**, 140
- Venus**
- Spectropolarimetry of Venus and Jupiter Clouds: Information Content of Equivalent Widths
Buriez, J.C., Fouquart, Y., Fymat, A.L. **79**, 287
- Calculation of the Solar Gravitational Torque on the Venus Thermal Tide
Teitelbaum, H., Cot, C. **97**, 265
- A First Order Approximation Model of CO₂ Infrared Bands in the Venusian Lower Thermosphere
Battaner, E., Rodrigo, R., López-Puertas, M. **112**, 229
- Very Long Baseline Interferometry (VLBI)**
- Very High Resolution Observations of the Nearby Quasar 0241+622
Geldzahler, B.J., Shaffer, D.B. **76**, L21
- High Resolution Observations of the Compact Central Component in the Giant Radio Source 3C 236
Schilizzi, R.T., Miley, G.K., van Ardenne, A., Baud, B., Baath, L., Rönnäng, B.O., Pauliny-Toth, I.I.K. **77**, 1
- VLBI Observations of Compact Components in Extended Radio Sources
Kapahi, V.K., Schilizzi, R.T. **77**, 371; **38**, 11
- H₂O in W 51 Main: An Expanding Bubble around a Young Massive Star?
Genzel, R., Downes, D., Moran, J.M., Johnston, K.J., Spencer, J.H., Matveyenko, L.I., Kogan, L.R., Kostenko, V.I., Rönnäng, B., Haschick, A.D. **78**, 239
- VLBI Detection of SS 433
Schilizzi, R.T., Norman, C.A., van Breugel, W., Hummel, E. **79**, L26
- Erratum: VLBI Detection of SS 433
Schilizzi, R.T., Norman, C.A., van Breugel, W., Hummel, E. **97**, 413
- New VLBI Maps of H₂O Sources in Different Stages of Evolution
Downes, D., Genzel, R., Moran, J.M., Johnston, K.J., Matveyenko, L.I., Kogan, L.R., Kostenko, V.I., Rönnäng, B. **79**, 233
- Structural Changes in the Nucleus of NGC 1275 at 2.8 cm Wavelength
Preuss, E., Kellermann, K.I., Pauliny-Toth, I.I.K., Witzel, A. **79**, 268
- Time-dependent Radio Fine Structure of the Compact Sources NRAO 150 and 4C 39.25
Baath, L.B., Cotton, W.D., Counselman, C.C., Shapiro, I.I., Wittels, J.J., Hinteregger, H.F., Knight, C.A., Rogers, A.E.E., Whitney, A.R., Clark, T.A. **86**, 364
- Measurement of Excess Radio Transmission Length on Earth-space Paths
Hogg, D.C., Guiraud, F.O., Decker, M.T. **95**, 304
- VLBI Observations of a Mixed Selection of Extra-galactic Objects
van Breugel, W.J.M., Schilizzi, R.T., Hummel, E., Kapahi, V.K. **96**, 310
- The Radio Fine Structure of the BL Lacertae Objects AO0235+164, 0735+178, BL Lac, 1749+701, Mk 421, and 3C 66A at 5 GHz
Baath, L.B., Elgered, G., Lundqvist, G., Graham, D.A., Weiler, K.W., Seielstad, G.A., Tallqvist, S., Schilizzi, R.T. **96**, 316
- VLBI Observations of the Quasar DA 193
Schilizzi, R.T., Shaver, P.A. **96**, 365
- VLBI Observations of the Nucleus of the Radio Galaxy Cygnus A
Kellermann, K.I., Downes, A.J.B., Pauliny-Toth, I.I.K., Preuss, E., Shaffer, D.B., Witzel, A. **97**, L1

VLBI Observations of Selected Galaxies

Graham, D.A., Weiler, K.W., Wielebinski, R. **97**, 388

Very High Resolution Observations of SS 433 at 10.65 GHz

Geldzahler, B.J., Downes, A.J.B., Shaffer, D.B. **98**, 205

On Symmetric Structure in Compact Radio Sources

Phillips, R.B., Mutel, R.L. **106**, 21

VLBI Observations of 12 Compact Radio Sources North of Declination 70°

Eckart, A., Hill, P., Johnston, K.J., Pauliny-Toth, I.I.K., Spencer, J.H., Witzel, A. **108**, 157

VLBI Observations of the Core Sources of a Sample of Spiral Galaxies

Hummel, E., Fanti, C., Parma, P., Schilizzi, R.T. **114**, 400

The Connection of a Catalogue of Stars with an Extragalactic Reference Frame

Froeschlé, M., Kovalevsky, J. **116**, 89

VLBI of solar flares

Tapping, K.F., Kuijpers, J., Kaastra, J.S., van Nieuwkoop, J., Graham, D., Slottje, C. **122**, 177

A VLBI search for compact components in extended high redshift quasars

Barthel, P.D. **126**, 16

VLBI observations of the early-type galaxies NGC 2911 and NGC 4278

Schilizzi, R.T., Fanti, C., Fanti, R., Parma, P. **126**, 412

The compact radio core of Mkn 348: evidence for directed outflow in a type 2 Seyfert galaxy

Neff, S.G., de Bruyn, A.G. **128**, 318

Violet Shift, see Red Shift**Virial Theorem****Groups of Galaxies with Large Crossing Times**

Klinkhamer, F.R. **91**, 365

Erratum: Groups of Galaxies with Large Crossing Times

Klinkhamer, F.R. **97**, 414

The Equilibrium and Bifurcation of Rotating Stellar Systems

Wiegandt, R. **105**, 326

Galaxy Groups: Sample-dependence of Virial Properties

Mardirossian, F., Mezzetti, M., Giuricin, G. **111**, 86

A virial mass determination of the open cluster NGC 6494

McNamara, B.J., Sanders, W.L. **118**, 361

The tensor virial theorem for subsystems

Brosche, P., Caimmi, R., Secco, L. **125**, 338

Visual Binaries, see Double Stars, visual**uvby photometry of Visual Double Stars: Absolute Magnitudes of Intrinsically Bright Stars**

Olsen, E.H. **110**, 179; **48**, 165

ADS 3230: Two Possible Solutions in the Computation of the Orbital Elements (Text in French)

Scardia, M. **114**, 419; **50**, 19

VV Cephei Stars**The Spectra and Colors of Two New VV Cephei Stars**

Drilling, J.S. **71**, 214

The UV Spectrum of VV Cep in 1978

Faraggiana, R. **76**, L18

Spectroscopic Observations of VV Cep. II. The Egress Phase of the 1976/78 Eclipse

Möllenhoff, C., Schaifers, K. **94**, 333

On Excitation Through Radiative Pumping of the Fe II UV-Mult. 191 λ 1785-88 Å Observed with IUE during the Eclipse of 32 Cyg

Hempe, K., Reimers, D. **107**, 36

The Ultraviolet Spectrum of KQ Puppis (Boss 1985)

Altamore, A., Giangrande, A., Viotti, R. **112**, 179; **49**, 511

Principal components analysis of spectral data. II. Error analysis and applications to interstellar reddening, luminosity classification of M supergiants, and the analysis of VV Cephei stars

Whitney, C.A. **119**, 325; **51**, 463

A study of ultraviolet spectra of ξ Aur/VV Cep systems. III. Atlas of theoretical curves of growth

Hempe, K. **126**, 220; **53**, 339

Boss 1985: mass loss investigation based on IUE spectra

Che, A., Reimers, D. **127**, 227

W Ursae Majoris Stars, see also Eclipsing Binaries**Four-colour uvby Observations of W UMa**

Linnaluoto, S., Pirola, V. **73**, 364; **36**, 33

Absolute Characteristics of the W UMa System V 535 Arae

Schöffel, E. **73**, 369; **36**, 287

UZ Octantis: UBV Light Curves

de Sisteró, M.E.C., Sisteró, R.F., Candellero, B. **78**, 249; **38**, 171

Periodic Variations in the Light Curve of VW Cephei

Walter, K. **80**, 27

The Angular Momentum Controlled Evolution of Solar Type Contact

Van't Veer, F. **80**, 287

On the Stability of Age-zero Contact Binaries. I

Hazlehurst, J., Refsdal, S. **84**, 200

A 3.5 Year Secondary Period in the W UMa System TZ Bootis

Hoffmann, M. **85**, 267; **40**, 263

Period Changes in Close Binaries Caused by the Presence of a Third Companion

Havnes, O. **92**, 151

On the Stability and Evolution of Evolved Contact Binaries

Refsdal, S., Stabell, R. **93**, 297

Infrared Light Curves of the Contact Binary 44 i Bootis

Bergeat, J., van't Veer, F., Lunel, M., Garnier, R., Sibille, F., Roux, S. **94**, 350

Infrared Light Curves of the Contact Binary 44 i Bootis

Bergeat, J., Van't Veer, F., Lunel, M., Garnier, R., Sibille, F., Roux, S. **95**, 395; **43**, 257

BB Peg: A WUMa-W System with a High Degree of Overcontact

Cerruti-Sola, M., Milano, L., Scaltriti, F. **101**, 273

Evolution of W UMa Systems and Angular Momentum Loss

Rahunen, T. **102**, 81

Determination of Parameters of W UMa Systems. I: AE Phe, AQ

Tuc, 44 i Boo

Maceroni, C., Milano, L., Russo, G., Sollazzo, C. **102**, 279; **45**, 187

On the Evolutionary State of the W Ursae Majoris Contact Binaries

Van Hamme, W. **105**, 389

Detached \rightarrow Contact Scenario for the Origin of WUMa Stars

Vilhu, O. **109**, 17

On the Stability and Evolution of Contact Binaries. I

Rahunen, T. **109**, 66

Observations and Analysis of the Light Curve of AE Phoenicis in 1978

Walter, K. **109**, 107

On the Stability of Age-zero Contact Binaries. II

Hazlehurst, J., Höppner, W., Refsdal, S. **109**, 117

Determination of Parameters of W UMa Systems. III: CC Com, YY Eri, V502 Oph and TY Pup

Maceroni, C., Milano, L., Russo, G. **111**, 212; **49**, 123

Contact Binaries: Angular Momentum Loss In and Out of Contact

Rucinski, S.M. **112**, 273

Estimated Absolute Dimensions and the Inferred Lifetime and Angular Momentum of W Ursae Majoris Contact Binaries

Van Hamme, W. **116**, 27

On the stability and evolution of contact binaries. II

Rahunen, T. **117**, 235

Seasonal light curves of TY UMa: observations and solutions

Brogia, P., Conconi, P. **118**, 209; **51**, 97

Determination of parameters of W UMa systems. IV: BV Dra, BW Dra, EM Lac, SW Lac

Maceroni, C., Milano, L., Russo, G. **119**, 325; **51**, 435

Photometric observations of AC Boo

Schieven, G., Morton, J.C., McLean, B.J., Hughes, V.A. **123**, 360; **52**, 463

Light curves and elements of AH Virginis

Niarchos, P.G. **124**, 151; **53**, 13

Violet and ultraviolet continua of W UMa systems of the basis of *wby* photometry observations

Rucinski, S.M. **127**, 84

Starspots in VW Cephei

Walter, K. **128**, 391

W Virginis Stars, see Cepheids

Wavelength

The Spectrum of the WC-O VI Star ST 3 in the Yellow Range

Thévenin, F., Pitault, A. **108**, 195

Terrestrial O₂ Lines Used as Wavelength References: Comparison of Measurements and Model Computations

Balthasar, H., Thiele, U., Wöhl, H. **114**, 357

Non-adiabatic quasi-toroidal modes in a slowly rotating star: application to ZZ Ceti

Berthomieu, G., Provost, J. **122**, 199

White Dwarfs

The Effective Temperatures and Helium Abundances of DO White Dwarfs

Koester, D., Liebert, J., Hege, E.K. **71**, 163

Accretion from Interstellar Clouds and White Dwarf Spectral Evolution

Wesemael, F. **72**, 104

On the Effective Temperature of Sirius B

Koester, D. **72**, 376

White Dwarf External Layers IV Interpretation of Spectra

D'Antona, F., Mazzitelli, I. **74**, 161

White Dwarf Luminosity in a Scale Covariant Theory of Gravity

Lodenquai, J. **76**, 212

Atmospheric Parameters and Mass Distribution of DA White Dwarfs

Koester, D., Schulz, H., Weidemann, V. **76**, 262

Minimum-flux Coronal Models for Hydrogen and Helium White Dwarf Atmospheres

Lampton, M., Mewe, R. **78**, 104

Interstellar Absorption of the Extreme Ultraviolet Flux from Two Hot White Dwarfs

Cash, W., Bowyer, S., Lampton, M. **80**, 67

The Chemical Evolution of White Dwarf Atmospheres: Diffusion and Accretion

Vauclair, G., Vauclair, S., Greenstein, J.L. **80**, 79

White Dwarf Constraints on Mass Loss Rates and Models of Galactic Evolution

Koester, D., Weidemann, V. **81**, 145

IUE Observation of Strong UV Absorption in the Spectrum of the C₂ White Dwarf LP 145-141

Weidemann, V., Koester, D., Vauclair, G. **83**, L13

The Cool DA White Dwarf G 128-7: Atmospheric Parameters and Evolutionary Consequences

Wehrse, R., Liebert, J. **83**, 184

Ultraviolet Observations of AM Herculis

Tanzi, E.G., Tarengi, M., Treves, A., Howarth, I.D., Willis, A.J., Wilson, R. **83**, 270

Model Atmospheres for DB White Dwarfs

Koester, D. **83**, 384; **39**, 401

H_γ Line Profiles and Masses of DA White Dwarfs

Weidemann, V., Koester, D. **85**, 208

Stability of White Dwarfs Undergoing Spherically Symmetric Steady-state Accretion

Sienkiewicz, R. **85**, 295

A Spectrum Analysis for the Unusual Metallic Line White Dwarf G 165-7

Wehrse, R., Liebert, J. **86**, 139

The Basic Structure of Hot White Dwarfs Atmospheres as a Function of Composition

Böhm, K.H., Kapranidis, S. **87**, 307

A Search for Variability in White Dwarfs in the Region of the Hyades

Peterson, D.W., Beavers, W.I. **92**, 214

Erratum: "IUE Observation of Strong UV Absorption in the Spectrum of the C₂ White Dwarf L 145-141"

Weidemann, V., Koester, D., Vauclair, G. **94**, 206

Spectroscopy of Suspected Peculiar DA White Dwarfs. II. Atmospheric Parameters and Radii

Schulz, H., Wegner, G. **94**, 272

IUE Observation of UV Carbon I Absorption Lines in the Spectrum of the C₂ White Dwarf L 97-3

Weidemann, V., Koester, D., Vauclair, G. **95**, L9

Excitation of Gravity Modes in White Dwarfs with Chemically Stratified Envelopes

Dziembowski, W., Koester, D. **97**, 16

Strömgren Photometry of Cool White Dwarfs

Lacombe, P., Fontaine, G. **97**, 416; **43**, 367

Spectroscopy of Suspected Peculiar DA White Dwarfs I: Equivalent Widths and Line Profiles

Wegner, G., Schulz, H. **97**, 418; **43**, 473

Discovery of Strong Ultraviolet Absorption in the Spectrum of the DC White Dwarf G 33-49

Vauclair, G., Weidemann, V., Koester, D. **100**, 113

New Spectral Classifications for two Peculiar White Dwarfs

Wegner, G. **102**, 223

Determination of Atmospheric Parameters for DB White Dwarfs

Koester, D., Schulz, H., Wegner, G. **102**, 331

Gravity Modes Instability in DA White Dwarfs

Dolez, N., Vauclair, G. **102**, 375

G 255-2: A New ZZ Ceti Variable Star

Vauclair, G., Dolez, N., Chevreton, M. **103**, L17

The Influence of the C_2 Absorption Bands on the U , B , V Magnitudes of Carbon White Dwarfs

Durret, F., Vauclair, G. **106**, 67

Spectroscopic and Photometric Observations of White Dwarfs

Koester, D., Weidemann, V. **108**, 406

IUE Observation of UV Absorption in the Spectrum of the C_2 White Dwarf L1363-3

Vauclair, G., Weidemann, V., Koester, D. **109**, 7

Visual and Near Infrared Photometry of 2 A 0311-227

Motch, C., van Paradijs, J., Pedersen, H., Ilovaisky, S.A., Chevalier, C. **110**, 316

On the "Just Overlapping Line Approximation" for Molecular Absorption

Zeidler-K.T., E.-M., Koester, D. **113**, 173

Comments on Radial White Dwarf Accretion

Kuijpers, J., Pringle, J.E. **114**, L4

PS 74: The Discovery of a New SU UMa Type Dwarf Nova with High Orbital Inclination

Barwig, H., Hunger, K., Kudritzki, R.P., Vogt, N. **114**, L11

Atmospheric Parameters and Carbon Abundance of White Dwarfs of Spectral Types C_2 and DC

Koester, D., Weidemann, V., Zeidler-K.T., E.-M. **116**, 147

Spectroscopic Identification of White Dwarfs in Galactic Clusters. II. NGC 2516

Reimers, D., Koester, D. **116**, 341

Evolution of very low-mass stars

van der Linden, T., Staller, R. **118**, 285

Identification of gravity modes in the newly discovered ZZ Ceti variable GD66

Dolez, N., Vauclair, G., Chevreton, M. **121**, L23

The upper mass limit for white dwarf progenitors and the initial-final mass relation for low and intermediate mass stars

Weidemann, V., Koester, D. **121**, 77

Freezing of a carbon-oxygen white dwarf

Mochkovitch, R. **122**, 212

The hydrogen-rich, cool DA white dwarf Ross 627

Liebert, J., Wehrse, R. **122**, 297

Sanduleak-Pesch's twin white dwarf object

Schnell, A., Purgathofer, A. **122**, 325

The temperature of the pulsating DB white dwarf GD 358

Koester, D., Weidemann, V., Vauclair, G. **123**, L11

The formation of massive white dwarfs in cataclysmic binaries

Law, W.Y., Ritter, H. **123**, 33

Oxygen neutronization in accreting white dwarfs

Bravo, E., Isern, J., Labay, J., Canal, R. **124**, 39

Phase transitions in stellar cores. I. Equilibrium configurations

Schaeffer, R., Haensel, P., Zdenek, L. **126**, 121

Physical properties and evolution of the two white dwarfs in the Sanduleak-Pesch binary

Greenstein, J.L., Dolez, N., Vauclair, G. **127**, 25

Ultraviolet carbon lines in the spectrum of the white dwarf BPM 11668

Wegner, G. **128**, 258

Wilson Bappu Effect

Theoretical Temperature Minima for Arcturus (K 2 IIIp), a Possible Explanation of the Wilson Bappu Effect

Ulmschneider, P., Schmitz, F., Hammer, R. **74**, 229

Wolf-Rayet Stars, see also Close Binaries

Photometry and Spectrography of Faint Wolf-Rayet Stars

Lundström, I., Stenholm, B. **72**, 379; **35**, 303

Small Magellanic Cloud, Additional Lists of Probable Members and Foreground Stars

Azzopardi, M., Vigneau, J. **72**, 380; **35**, 353

Massive Stars: Evolution with Mass-loss. II. Mass Loss in Early Phases, and Evolution Status of the Transition Wolf-Rayet Stars

Chiosi, C., Nasi, E., Bertelli, G. **74**, 62

A Search for New Wolf-Rayet Stars in the Small Magellanic Cloud

Azzopardi, M., Breysacher, J. **75**, 120

New Wolf-Rayet Stars in the Large Magellanic Cloud

Azzopardi, M., Breysacher, J. **75**, 243

The Intrinsically Bright Wolf-Rayet Stars of Type WN 7. IV. The Galactic WN 7/WN 8 Stars as Massive O-Stars in Advanced Stages of Evolution

Moffat, A.F.J., Seggewiss, W. **77**, 128

ANS Ultraviolet Observations of Wolf-Rayet Stars

van der Hucht, K.A., Cassinelli, J.P., Wesseliuss, P.R., Chi-Chao Wu **78**, 251; **38**, 279

Evolution of Massive He Burning Stars Losing Mass by Stellar Wind. An Application to WR Binaries

Vanbeveren, D., Packett, W. **80**, 242

More Wolf-rayet Stars in the Large Magellanic Cloud

Azzopardi, M., Breysacher, J. **81**, 387; **39**, 19

Tr 27-28: A WC9-type Star with Large Infrared Excess

Thé, P.S., Tjin A. Djie, H.R.E., Wamsteker, W. **84**, 263

The Hot White Dwarf HZ 43 II. The Helium Abundance Derived from Its Ultra Soft X-ray Spectrum

Heise, J., Huizenga, H. **84**, 280

The Nature of Single-line Population I Wolf-Rayet Stars. Evidence for High Space Velocity

Moffat, A.F.J., Isserstedt, J. **85**, 201

The Intrinsically Bright Wolf-Rayet Stars of Type WN 7. V. The Single-line Runaway Binary HD 197406

Moffat, A.F.J., Seggewiss, W. **86**, 87

On the Structure and Composition of the Wolf-Rayet Atmospheres

Sahade, J. **87**, L7

The Variation of the CNO Abundances in Massive Binary Systems: an Application to Wolf-Rayet Stars

Vanbeveren, D., Doom, C. **87**, 77

The Calculation of the Optical Spectra of NGC 6888

Contini, M., Shaviv, G. **88**, 117

On the Binary Frequency Distribution and Evolution of Wolf-Rayet Stars

Vanbeveren, D., Conti, P.S. **88**, 230

The Numbers of Red Supergiants and WR Stars in Galaxies: An Extremely Sensitive Indicator of Chemical Composition

Maeder, A., Lequeux, J., Azzopardi, M. **90**, L17

New Photoelectric Observations of the Wolf-Rayet Star HD 5980 in the Small Magellanic Cloud

Breysacher, J., Perrier, C. **90**, 207

An Anonymous Ring Nebula around a WC 6 Star in Carina

Lortet, M.C., Niemela, V.S., Tarsia, R. **90**, 210

The Variable, Single-line Wolf-Rayet Star HD 96548 with a Low-mass Companion

Moffat, A.F.J., Isserstedt, J. **91**, 147

Surface Composition Changes in Massive Star Evolution with Mass Loss

Noels, A., Conti, P.S., Gabriel, M., Vreux, J.M. **92**, 242

Rates of Mass Loss from O-stars

Chiosi, C. **93**, 163

Spectral Classification of Wolf-Rayet Stars in the Large Magellanic Cloud

Breysacher, J. **93**, 394; **43**, 203

The C/N Ratio and N¹⁴ Abundance as Tests of the Theories of Wolf-Rayet Stars Formation

Gabriel, M., Noels, A. **94**, L1

Precession and System Parameters in Early-type Binary Models for SS 433

Hut, P., van den Heuvel, E.P.J. **94**, 327

The Mass and Mass Ratio Distribution of Massive O Type Single Stars and Binaries

Vanbeveren, D. **95**, 321

Spectral Classification of Wolf-Rayet Stars in the Large Magellanic Cloud

Breysacher, J. **95**, 394; **43**, 203

A Catalogue of Low-resolution Wolf-Rayet Spectra

Sivertsen, S. **95**, 394; **43**, 221

The Variable, Single-line WC9 Wolf-Rayet Star HD 164270 with a Low-mass Companion

Isserstedt, J., Moffat, A.F.J. **96**, 133

Possible Association of a WC-OVI Star with an Active Site of Star Formation

Pitault, A. **97**, L5

Study of Compact Planetary Nebulae. II. Temperatures, Luminosities and Problems of Evolution of the Central Stars

Martin, W. **98**, 328

The Most Massive Stars Evolving to Red Supergiants: Evolution with Mass Loss, WR Stars as Post-red Supergiants and Pre-supernovae

Maeder, A. **99**, 97

Observations of Wolf-Rayet Stars in the Emission-line Galaxy Tololo 3

Kunth, D., Sargent, W.L.W. **101**, L5

Evolution of Massive Stars with Mass Loss and Formation of WR Stars

Noels, A., Gabriel, M. **101**, 215

Grids of Evolutionary Models for the Upper Part of the HR Diagram. Mass Loss and the Turning of Some Red Supergiants into WR Stars

Maeder, A. **102**, 401

Multiplicity and Absolute Magnitudes of Wolf-Rayet Stars in the Large Magellanic Cloud

Prévot-Burnichon, M.L., Prévot, L., Rebeiro, E., Rousseau, J., Martin, N. **103**, 83

Star Formation and Extinction in Extragalactic H II Regions

Lequeux, J., Maucherat-Joubert, M., Deharveng, J.M., Kunth, D. **103**, 305

Evolutionary Scenarios Leading Massive Stars to WR Stars: Their Mutual Importance; the Role of Mixing

Maeder, A. **105**, 149

On the Evolutionary Scenario of Massive Close Binaries with Primary Masses Between 20 *M*_⊙ and 160 *M*_⊙

Vanbeveren, D. **105**, 260

Wolf-Rayet Stars in Extragalactic H II Regions: Discovery of a Peculiar WR in IC 1613/ 3

D'Odorico, S., Rosa, M. **105**, 410

IUE Ultraviolet Spectrophotometry of 15 Galactic Wolf-Rayet Stars

Nussbaumer, H., Schmutz, W., Smith, L.J., Willis, A.J. **106**, 379; **47**, 257

The Variable, Single-line WN8 Star HD 86161: Another Wolf-Rayet Star with a Low-mass Companion

Moffat, A.F.J., Niemela, V.S. **108**, 326

Wolf-Rayet Stars in Extragalactic H II Regions. II. NGC 604 — a Giant H II Region Dominated by Many Wolf-Rayet Stars

Rosa, M., D'Odorico, S. **108**, 339

R 136: WN or O Spectral Characteristics?

Vreux, J.M., Dennefeld, M., Andriolat, Y. **113**, L10

The Theoretical Expected Galactic Distribution of WR Runaway Stars

Vanbeveren, D. **113**, 205

The Fastest Runaway Wolf-Rayet Star of Population I in the Galaxy, 209 BAC: Evidence for a Low Mass Companion

Moffat, A.F.J., Lamontagne, R., Seggewiss, W. **114**, 135

Spectrophotometry of Wolf-Rayet Star Candidates in M 33

Wampler, E.J. **114**, 165

The Ultimate Fate of Wolf-Rayet Stars as Supernovae

Maeder, A., Lequeux, J. **114**, 409

The Theoretically Expected X-ray Luminosity and the Binary Nature of Wolf-Rayet Runaway Stars

Vanbeveren, D., Van Rensbergen, W., de Loore, C. **115**, 69

M1-67: A Wind-blown Bubble Carried Along by the High-velocity WR Star 209 BAC?

Solf, J., Carsenty, U. **116**, 54

NGC 2359: the H II-region driven by the WR-star HD 56925

Goudis, C., Hippelein, H., Münch, G. **117**, 127

Optical observations of the LMC H II region N 11

Heydari-Malayeri, M., Testor, G. **118**, 116

Near infrared spectroscopy and infrared photometry of a new WC9 star

Danks, A.C., Dennefeld, M., Wamsteker, W., Shaver, P.A. **118**, 301

Mass function for massive stars

Bisacchi, G.F., Firmani, C., Sarmiento, A.F. **119**, 167

The influence of overshooting on the evolution of massive close binaries

Vanbeveren, D. **119**, 239

Photoelectric *UBV*-photometry of Wolf-Rayet stars in the Large Magellanic Cloud

Feitzinger, J.V., Isserstedt, J. **119**, 326; **51**, 505

Infrared photometry of southern Wolf-Rayet stars

Pitault, A., Epchtein, N., Gómez, A.E., Lortet, M.C. **120**, 53

The combined effect of mass loss and overshooting. III. Evolutionary scenarios for massive close binaries

Doom, C., de Grève, J.P. **120**, 97

Evolution of chemical abundances in massive stars. I. OB stars, Hubble-Sandage variables and Wolf-Rayet stars. Changes at stellar surface and galactic enrichment by stellar winds

Maeder, A. **120**, 113

Evolution of chemical abundances in massive stars. II. Abundance anomalies in Wolf-Rayet stars in relation with cosmic rays and ²²Ne in meteorites

Maeder, A. **120**, 130

P Cygni stars as an intermediate stage between red supergiants and Wolf-Rayet stars

Lamers, H.J.G.L.M., de Groot, M., Cassatella, A. **123**, L8

Discovery of a Wolf-Rayet star in NGC 6822

Westerlund, B.E., Azzopardi, M., Breysacher, J., Lequeux, J. **123**, 159

Theoretical evolution of massive stellar aggregates

Vanbeveren, D. **124**, 71

The populations of massive stars in the Galaxy: their frequency gradients in relation to metallicity and initial mass function

Meylan, G., Maeder, A. **124**, 84

Search for Wolf-Rayet features in the spectra of giant H II regions.

I. Observations in NGC 300, NGC 604, NGC 5457, and He 2-10

D'Odorico, S., Rosa, M., Wampler, E.J. **124**, 154; **53**, 97

The bright stellar content of the giant galactic H II region NGC 3603

Moffat, A.F.J. **124**, 273

The runaway Wolf-Rayet star HD 143414: evidence for a low-mass companion

Isserstedt, J., Moffat, A.F.J., Niemela, V.S. **126**, 183

Absolute measurements of flux in the continuum of galactic Wolf-Rayet stars: comparison with main-sequence OB stars.

Hua Chon-Trung, Woo Jong-Ok, Nguyen Huu-Doan **126**, 222; **53**, 407

R 127: an S Dor type variable intermediate between Of and WN

Stahl, O., Wolf, B., Klare, G., Cassatella, A., Krautter, J., Persi, P., Ferrari-Toniolo, M. **127**, 49

CQ Cephei. Is the period really changing?

Walker, E.N., Lloyd, C., Pike, C.D., Stickland, D.J., Zuiderwijk, E.J. **128**, 394

X-ray Binaries, see also X-ray Radiation

Optical Light Curve of the X-ray Binary 4 U 1538-52

Ilovaisky, S.A., Chevalier, C., Motch, C. **71**, L17

Highly Compact Binary X-ray Sources

Joss, P.C., Rappaport, S. **71**, 217

Roche-lobe Overflow and Massive X-ray Binary Systems

Savonije, G.J. **71**, 352

The Accretion Picture of Cen X-3 as Inferred from One Month of Continuous X-ray Observations

Bonnet-Bidaud, J.M., van der Klis, M. **73**, 90

The Rotational History of a Binary X-ray Pulsar

Wang, Y.-M. **74**, 253

UBV Photometry of SMC X-2

Schlosser, W., Paradijs, J. **van 75**, 112

Accretion onto ZAMS Stars: Application to β Lyrae and Remarks on X-ray Binaries

Packet, W., Grève, J.P. **de 75**, 255

Optical Light Curve of the X-ray Binary 4U 1538-52

Ilovaisky, S.A., Chevalier, C., Motch, Ch. **75**, 258

HZ Herculis and the Match Paradox

Kippenhahn, R., Thomas, H.C. **75**, 281

Spectroscopic Observations of the Early Type B-Supergiant Wray 977 (4U 1223-62): Description of the Spectrum and Classification

Hammerschlag-Hensberge, G., de Loore, C., van den Heuvel, E.P.J., Zuiderwijk, E.J. **76**, 245

The Influence of Stellar Wind on the Evolution of Massive Binaries with an Application to Massive X-ray Binaries

Vanbeveren, D., De Grève, J.P. **77**, 295

First Coordinated Campaign of X-ray and Ground Based Observations of X-Persei = 3 U 0352 + 30

de Loore, C., Altamore, A., Baratta, G.B., Bunner, A.N., Divan, L., Doazan, V., Hensberge, H., Sterken, C., Viotti, R. **78**, 287

Minimum Projection in Eccentric Binary Orbits

Mammamo, A. **79**, 204

Cygnus X-1 - a Neutron Star Surrounded by a Massive Disk?

Kundt, W. **80**, L7

On the Evolutionary Status of the Optical Components of Massive X-ray Binaries

Savonije, G.J. **81**, 25

Roche Lobe Formation in Highly Eccentric X-ray Binary Systems

Haynes, R.F., Lerche, I., Wright, A.E. **81**, 83

UBV Photometry of V 616 Mon (A 0620-00)

Chevalier, C., Janot-Pacheco, E., Mauder, H., Ilovaisky, S.A. **81**, 368

Ultraviolet Observations of AM Herculis

Tanzi, E.G., Tarengi, M., Treves, A., Howarth, I.D., Willis, A.J., Wilson, R. **83**, 270

Do all Binary X-ray Pulsars Spin-up by Accretion from a Keplerian Disc?

Savonije, G.J. **83**, 375

Radio Observations of Cyg X-1 During the 1977 Campaign

Woodsworth, A.W., Higgs, L.A., Gregory, P.C. **84**, 379

Periodic and Secular Variations in the Lightcurve of Dwarf Nova EX Hydrae

Vogt, N., Krzeminski, W., Sterken, C. **85**, 106

Simultaneous Optical Photometric and Spectroscopic Observations of 2A0331-227

Verbunt, F., van den Heuvel, E.P.J., van der Linden, Th.J., Brand, J., van Leeuwen, F., van Paradijs, J. **86**, L10

34.1 Day Periodicity in Cyg X-3

Molteni, D., Rapisarda, M., Robba, N.R., Scarsi, I. **87**, 88

X-ray Induced Shocks in Stellar Winds

Fransson, C., Fabian, A.C. **87**, 102

Polarimetric Observations of the Massive X-ray Binaries HD 77581 (4U 0900-40) and HD 153919 (4U 1700-37)

Paradijs, J. **van 87**, 210

Hard X-ray Features in the Spectra of Binary X-ray Sources

Evans, A.J., Quenby, J.J., Engel, A.R. **87**, 252; **41**, 13

Binary Model of Circinus X-1. I. Eccentricity from Combined X-ray and Radio Observations

Murdin, P., Jauncey, D.L., Haynes, R.F., Lerche, I., Nicolson, G.D., Holt, S.S., Kaluziński, L.J. **87**, 292

Binary Model of Circinus X-1. II. Radio Emission

Haynes, R.F., Lerche, I., Murdin, P. **87**, 299

Iron Line Emission from the Alfvén Shell in X-ray Binaries

Basko, M.M. **87**, 330

Evolution of a Blue Supergiant with a Neutron Star Companion Immersed in Its Envelope

Delgado, A.J. **87**, 343

Spectroscopy of EX Hydrae

Breysacher, J., Vogt, N. **87**, 349

Characteristics of the Cen X-3 Neutron Star from Correlated Spin-up and X-ray Luminosity Measurements

van der Klis, M., Bonnet-Bidaud, J.M., Robba, N.R. **88**, 8

On the Influence of Radiation Pressure on the Light Curve of HZ Herculis

Krebs, J. **88**, 363

I.U.E. Observations of HD 102 567, the Proposed Optical Counterpart of 4U 1145-61

Bianchi, L., Bernacca, P.L. **89**, 214

A Discussion of the Eccentric Binary Hypothesis for Transient X-Ray Sources. II. Gradual Acceleration Stellar Wind Model

Avni, Y., Goldman, I. **90**, 44

UBV Photometry of HZ Herculis: the Shape of the Primary Minimum

Kippenhahn, R., Schmidt, H.U., Thomas, H.-C. **90**, 54

Optical Spectroscopy of Centaurus X-3

Mouchet, M., Ilovaisky, S.A., Chevalier, C. **90**, 113

Stability of Accretion Column Flows

Hameury, J.M., Bonazzola, S., Heyvaerts, J. **90**, 359

A Critique of the Polarimetric Evidence on the Nature of Cygnus X-1

Simmons, J.F.L., Aspin, C., Brown, J.C. **91**, 97

- On the Phase-locked Polarization Variations in Cygnus X-1
Kemp, J.C. **91**, 108
- Variable Linear Polarization in the X-ray Binary HD 77581
Korhonen, T., Piirola, V. **91**, 372
- Stability of Tidal Equilibrium
Hut, P. **92**, 167
- Infrared Photometry of HDE 226868 (Cyg X-1) from 2.3 to 10 μ : Mass Loss Rate
Persi, P., Ferrari-Toniolo, M., Grasdalen, G.L., Spada, G. **92**, 238
- Optical Eclipses in 2S 0921-630
Chevalier, C., Ilovaisky, S.A. **93**, L3
- Plasma Infall and X-ray Production in the Magnetic Funnel of an Accreting Neutron Star
Wang, Y.-M., Frank, J. **93**, 255
- Optical Eclipses in 2S 0921-630
Chevalier, C., Ilovaisky, S.A. **94**, L3
- The Inclination of the Orbital Plane of Cygnus X-1. A Monte Carlo Study
Daniel, J.-Y. **94**, 121
- A Model for 4 U 1700-37
Brinkmann, W. **94**, 323
- Precession and System Parameters in Early-type Binary Models for SS 433
Hut, P., van den Heuvel, E.P.J. **94**, 327
- IUE Observations of X Persei, the Proposed Optical Counterpart of the X-ray Source 4 U 0352+30
Bernacca, P.L., Bianchi, L. **94**, 345
- Photometry of X Persei in Late 1978
Mazeh, T., Brosch, N. **95**, 3
- A Change in Light Curve Asymmetry and the Ephemeris of Cygnus X-3
van der Klis, M., Bonnet-Bidaud, J.M. **95**, L5
- Some Aspects of Low-mass Close Binary Models for Bright Galactic Bulge X-ray Sources and 4 U 1626-67
Kieboom, K.H., Verbunt, F. **95**, L11
- Quantum Theory of Cyclotron Emission and the X-ray Line in Her X-1
Melrose, D.B., Zheleznyakov, V.V. **95**, 86
- A Discussion on *VBLUW* Photometry of the X-ray Binary HD 77581 (= Vela X-1 = 3 U 0900-40) and on the Overluminosity of the Primaries in X-ray Binaries. The Optical Micro Variability of the Hot Supergiant Primaries HD 77581 and HD 153919
van Genderen, A.M. **96**, 82
- New *VBLUW* Photometry of the X-ray Binary HD 153919 (4U 1700-37): The Optical Micro Variability of the O 6.5 f Supergiant
van Genderen, A.M., Windhorst, R.A. **97**, 79
- Long Term X-ray Observations of SMC X-1 Including a Turn-on
Bonnet-Bidaud, J.M., van der Klis, M. **97**, 134
- UV and Optical Observations of X-ray Sources in the Magellanic Clouds
Tarengi, M., Tanzi, E.G., Treves, A., Glencross, W.M., Howarth, I.D., Hammerschlag-Hensberge, G., Van den Heuvel, E.P.J., Lamers, H.J.G.L.M., Burger, M., Whitelock, P.A. **97**, 415; **43**, 353
- Do Neutron Star Magnetic Fields Decay
Kundt, W. **98**, 207
- Tidal Evolution in Close Binary Systems
Hut, P. **99**, 126
- New *VBLUW* Observations of the X-ray Binary HD 153919 (4U 1700-37)
van Genderen, A.M., Windhorst, R.A., Van Driel, W., Bakker, R., Wesselink, T.J.H., Hammerschlag-Hensberge, G. **99**, 204; **44**, 83
- A Photometric and Spectroscopic Study of He 3-640 (? = A 1118-61)
Janot-Pacheco, E., Ilovaisky, S.A., Chevalier, C. **99**, 274
- Magnetic Braking in Low-mass X-ray Binaries
Verbunt, F., Zwaan, C. **100**, L7
- Infrared and X-ray Observations of the Binary System V 861 Sco
Tanzi, E.G., Maraschi, L., Treves, A., Tarengi, M. **100**, 68
- A Discussion on New *VBLUW* Observations of the X-ray Binary Sk. 160 = SMC X-1
van Genderen, A.M., van Groningen, E. **101**, 101
- Ultraviolet Observations of LMC X-4 and SMC X-1
Bonnet-Bidaud, J.M., Ilovaisky, S.A., Mouchet, M., Hammerschlag-Hensberge, G., van der Klis, M., Glencross, W.M., Willis, A.J. **101**, 184
- The X-ray Modulation of Cygnus X-3
Bonnet-Bidaud, J.M., van der Klis, M. **101**, 299
- On Stellar Wind Accretion in Widely Separated X-ray Binaries, and the Nature of 4U 0115+63
Avni, Y., Goldman, I. **102**, 12
- The Ultraviolet Spectrum of the X-ray Source 2A0526-33
Mouchet, M., Bonnet-Bidaud, J.M., Ilovaisky, S.A., Chevalier, C. **102**, 31
- Spin-reversed Accretion as the Cause of Intermittent Spindown in Slow X-ray Pulsars
Wang, Y.-M. **102**, 36
- An Analysis of the Pulse Profiles of the Binary X-ray Pulsars
Wang, Y.-M., Welter, G.L. **102**, 97
- Simultaneous Spectroscopic and Photometric Observations of 2A0311-227
van Paradijs, J., Verbunt, F., van den Heuvel, E.P.J., van der Linden, T.J., Brand, J., van Leeuwen, F. **103**, 209; **46**, 89
- Correlation Between X-ray and High Energy Gamma-ray Emission from Cygnus X-3
Weekes, T.C., Danaher, S., Fegan, D.J., Porter, N.A. **104**, L4
- On the Elusive Cause of Cataclysmic Variable Outbursts
Meyer, F., Meyer-Hofmeister, E. **104**, L10
- HD 36705: A New Bright X-ray Emitting RS CVn Star
Pakull, M.W. **104**, 33
- Ultraviolet Observations of the Be Star and X-ray Binary 4U 1145-61 (= HD 102567 = Hen 715) obtained with the IUE
de Loore, C., Burger, M., Hensberge, H., Van Dessel, E.L. **104**, 150
- On the Evolutionary Scenario of Massive Close Binaries with Primary Masses Between 20 M_{\odot} and 160 M_{\odot}
Vanbeveren, D. **105**, 260
- The 6-day Photometric and Spectroscopic Periods in SS 433
Mateo, J.J., Whitmore, D.P. **106**, L9
- Vertical Structure of Accretion Disks
Meyer, F., Meyer-Hofmeister, E. **106**, 34
- A Study of Ultraviolet Spectroscopic and Light Variations in the X-ray Binaries LMC X-4 and SMC X-1
van der Klis, M., Hammerschlag-Hensberge, G., Bonnet-Bidaud, J.M., Ilovaisky, S.A., Mouchet, M., Glencross, W.M., Willis, A.J., van Paradijs, J., Zuiderwijk, E.J., Chevalier, C. **106**, 339
- Changing Orientation of Dipole and Spin Axes in Binary X-ray Pulsars
Wang, Y.-M., Robnik, M. **107**, 222

The Hard X-ray Spectrum of Cygnus X-1

Steinle, H., Voges, W., Pietsch, W., Reppin, C., Trümper, J., Kendziorra, E., Staubert, R. **107**, 350

Observation of Hard X-rays Line Emission from Her X-1

Polcaro, V.F., Bazzano, A., La Padula, C., Ubertini, P., Vialeto, G., Manchanda, R.K., Damle, S.V. **108**, 249

Discovery of Fast Optical Activity in the X-ray Source GX 339-4

Motch, C., Ilovaisky, S.A., Chevalier, C. **109**, L1

Non-thermal Emission from Relativistic Accretion Disks: A Simple Model for Axisymmetric Inhomogeneous Sources

Pineault, S. **109**, 294

Photoelectric Photometry of 4U 2129+47

Calafat, R., Canal, R., Núñez, J., Torra, J. **110**, 23

Tidal Evolution in Close Binary Systems for High Eccentricity

Hut, P. **110**, 37

Visual and Near Infrared Photometry of 2A 0311-227

Motch, C., van Paradijs, J., Pedersen, H., Ilovaisky, S.A., Chevalier, C. **110**, 316

GX339-4: Cyclotron Radiation from an Accretion Flow

Fabian, A.C., Guilbert, P.W., Motch, C., Ricketts, M., Ilovaisky, S.A., Chevalier, C. **111**, L9

On the Spin Down Episodes of Vela X-1

Molteni, D., Rapisarda, M., Re, S., Robba, N.R. **111**, 365

Color Variability and Optical Light Curve of 2S0921-630

Chevalier, C., Ilovaisky, S.A. **112**, 68

First Ultraviolet Observations of Two New Cataclysmic Variables 1 E0643-1648 and 4 U1849-31

Bonnet-Bidaud, J.M., Mouchet, M., Motch, C. **112**, 355

On the Short-term Variability of HD 153919 (=4U1700-37=V884 Sco)

van Paradijs, J., van der Woerd, H. **113**, 27

Plasma-magnetospheric Interaction in X-ray Sources: An Analysis of the Linear Kelvin-Helmholtz Instability

Wang, Y.-M., Welter, G.L. **113**, 113

X-ray Observations of Single-line Spectroscopic Binaries

Singh, K.P., Narayan, S. **113**, 167

Bulge X-ray Sources and Novae in M 31

Vader, J.P., van den Heuvel, E.P.J., Lewin, W.H.G., Takens, R.J. **113**, 328

The Nature of the 1E1145.1-6141 Optical Counterpart

Ilovaisky, S.A., Chevalier, C., Motch, C. **114**, L7

UBV-polarimetry of the X-ray Binaries HD 77581 (4U 0900-40), HD 153919 (4U 1700-37) and of HD 152667

Östreicher, R., Schulte-Ladbeck, R. **114**, 328

The Cycle-to-cycle Variability of Cygnus X-3

van der Klis, M., Bonnet-Bidaud, J.M. **114**, 422; **50**, 129

The Theoretically Expected X-ray Luminosity and the Binary Nature of Wolf-Rayet Runaway Stars

Vanbeveren, D., Van Rensbergen, W., de Loore, C. **115**, 69

The X-ray Flux Variations of Cygnus X-2

Bonnet-Bidaud, J.M., van der Klis, M. **116**, 232

Erratum: Tidal Evolution in Close Binary Systems for High Eccentricity

Hut, P. **116**, 351

Hercules X-1: a random walk noise model for the 35-day turn-ons

Staubert, R., Bezler, M., Kendziorra, E. **117**, 215

GX339-4: X-ray spectra of high and low states

Ricketts, M.J. **118**, L3

A numerical study of the nonlinear Rayleigh-Taylor instability, with application to accreting X-ray sources

Wang, Y.-M., Nepveu, M. **118**, 267

Search for light variability of LSI + 61°303

Bartolini, C., Custodi, P., Dell'Atti, F., Guarnieri, A., Piccioni, A. **118**, 365

Simultaneous X-ray/optical observations of GX 339-4 during the May 1981 optically bright state

Motch, C., Ricketts, M.J., Page, C.G., Ilovaisky, S.A., Chevalier, C. **119**, 171

The combined effect of mass loss and overshooting. III. Evolutionary scenarios for massive close binaries

Doom, C., de Grève, J.P. **120**, 97

Erratum: X-ray observations of single-line spectroscopic binaries

Singh, K.P., Narayan, S. **120**, 326

X-ray observations of bright galactic bulge sources in the vicinity of GX 5-1

van der Klis, M., Rappaport, S. **121**, 119

IUE spectrophotometry of X Persei (4U 0352+30)

Bernacca, P.L., Bianchi, L., Dorren, J.D., Perryman, M.A.C. **122**, 17

Optical photometry of massive X-ray binaries: 4U 1538-52/QV Nor

Pakull, M., van Amerongen, S., Bakker, R., van Paradijs, J. **122**, 79

A search for periodicities in the radio flaring of Cyg X-3

Woodsworth, A.W. **122**, 322

Correlations and periodicities of equivalent widths in SS 433

Vittone, A., Rusconi, L., Sedmak, G., Mammano, A., Ciatti, F. **124**, 154; **53**, 109

Optical photometry of massive X-ray binaries: Cen X-3/V779 Cen

van Paradijs, J., Lub, J., Pel, J.W., Pakull, M., van Amerongen, S. **124**, 294

The old-nova GK Per (1901). III. Accretion disc models

Bianchini, A., Sabbadin, F. **125**, 112

Photometric observations. Is HZ Herculis getting darker?

Thomas, H.-C., Africano, J., Delgado, A.J., Schmidt, H.U. **126**, 45

UBV photometry of the optical candidate for LMC X-3

van der Klis, M., Tjemkes, S., van Paradijs, J. **126**, 265

HZ Herculis, still active

Delgado, A.J., Schmidt, H.U., Thomas, H.-C. **127**, L15

X-ray Radiation and ... Sources, see also under the different Objects and Background Radiation, X-ray Binaries

Copernicus Observations of Theta-2, OriA, a Proposed Optical Counterpart of the X-ray Source 4U 0531-05

Bernacca, P.L., Bianchi, L. **75**, 61

X-ray Sources and Their Induced Surrounding Clouds

Chan, K.L., Henriksen, R.N., Chau, W.Y. **75**, 133

The Profile Evolution of X-ray Spectral Lines Due to Comptonization. Monte Carlo Computations

Pozdnyakov, L.A., Sobol, I.M., Sunyaev, R.A. **75**, 214

Cosmic Distances from X-ray and Microwave Observations of Clusters of Galaxies

Cavaliere, A., Danese, L., Zotti, G. **75**, 322

ESO 103-G 35: A New Seyfert Galaxy and Possible X-ray Source

Phillips, M.M., Feldman, F.R., Marshall, F.E., Wamsteker, W. **76**, L14

Supercritical Accretion on to Unmagnetized Neutron Stars and the Galactic Bulge X-ray Sources

Jones, B.C., Raine, D.J. **76**, 179

X-ray Observations of Some Radio Supernova Remnants by ANS

Gronenschild, E.H.B.M. **77**, 53

- Spectroscopic Observations of WRA 977. Line Identifications and Interstellar Features
Bord, D.J. **77**, 309
- Physical Parameter Profiles of Selected X-ray Flares
Wilson, R.M., Smith, J.E. **77**, 372; **38**, 79
- G 126.2+1.6, a Supernova Remnant near the X-ray transient 4U 0115+63
Reich, W., Kallas, E., Steube, R. **78**, L13
- General Relativistic Effects and the Radius and Mass of X-ray Bursters
Goldman, I. **78**, L15
- Cyclotron Line Formation by Resonant Compton-cyclotron Scattering in Hercules-XI
Bonazzola, S., Heyvaerts, J., Puget, J.L. **78**, 53
- Effects of Cyclotron Absorption in Hot Strongly Magnetized Plasma
Yahel, R.Z. **78**, 136
- On the System V 861 SCO \equiv OAO 1653-40
Tanzi, E.G., Treves, A., Salinari, P., Tarengi, M. **78**, 226
- Effect of Hard X-ray on the Emission Lines of Seyfert Galaxies and QSOs
Shields, G.A., Mushotzky, R.F. **79**, 56
- Constraints to Non-thermal Source Syntheses of X-ray Background
Cavaliere, A., Danese, L., De Zotti, G., Franceschini, A. **79**, 169
- The Nature of the Secondaries in Some Single-line Spectroscopic Binaries from X-ray Observations
den Boggende, A.J.F., Lamers, H.J.G.L., Mewe, R. **80**, 1
- An Early-type Binary Model for SS 433
van den Hewel, E.P.J., Ostriker, J.P., Petterson, J.A. **81**, L7
- Measurements of Weak X-ray Sources by ANS
Brinkmann, A.C., den Boggende, A.J.F., Heise, J., Mewe, R., Gronenschild, E.H.B.M., Schrijver, J., Parsignault, D., Grindlay, J. **81**, 185
- Thermal Radiation from Highly Magnetized Neutron Stars
Brinkmann, W. **82**, 352
- Point Source Contributions to the Extreme Ultraviolet Background
Stern, R., Bowyer, S. **83**, L1
- The Distribution of X-ray Sources in the Galaxy
Protheroe, R.J., Wolfendale, A.W. **84**, 128
- The Hot White Dwarf HZ 43 II. The Helium Abundance Derived from Its Ultra Soft X-ray Spectrum
Heise, J., Huizenga, H. **84**, 280
- X-ray Background and Discrete, Evolving Sources
Cavaliere, A., Danese, L., De Zotti, G., Franceschini, A. **85**, L9
- The Unique Spectrum of SS 433, a Star Inside a Supernova Remnant
Mammano, A., Ciatti, F., Vittone, A. **85**, 14
- X-ray Observations of the Cygnus Loop by ANS
Gronenschild, E.H.B.M. **85**, 66
- X-ray Characteristics of the Lupus Loop and SN 1006 Supernova Remnants
Toor, A. **85**, 184
- The Emission-line Variable in the Core of M 15
Fusi Pecci, F., Rosino, L., Voli, M. **85**, 269
- Comptonization of X-rays in Plasma Clouds. Typical Radiation Spectra
Sunyaev, R.A., Titarchuk, L.G. **86**, 121
- Electrodynamics of Disk Accretion onto Magnetic Neutron Star
Aly, J.J. **86**, 192
- On the Nature of the So-called Narrow-line X-ray Galaxies
Véron, P., Lindblad, P.O., Zuiderwijk, E.J., Véron, M.P., Adam, G. **87**, 245
- An Imaging Gas Scintillation Counter for X-ray Astronomy
Davelaar, J., Manzo, G., Peacock, A., Taylor, B.G., Andresen, R.D., Bleeker, J.A.M. **87**, 276
- New Upper Limits for Pulsed Soft X-rays from the Vela Pulsar PSR 0833-45
Zimmermann, H.U. **88**, 309
- Radio Observations of Globular Clusters and Galactic Bulge X-ray Sources
Gopal-Krishna, Steppe, H. **88**, 354
- The Cygnus X Region. XII. On the Excitation and Distance of the Gamma Cygni H II Region
Appenzeller, I., Wendker, H.J. **89**, 239
- 2S 1417-624: A Variable Galactic X-ray Source Near CG 312-1
Apparao, K.M.V., Naranan, S., Kelley, R.L., Bradt, H.V. **89**, 249
- Spectra and Pulse Formation Mechanism in X-ray Pulsars: Application to Her X-1
Yahel, R.Z. **90**, 26
- Radio and X-ray Observations of Abell 754
Harris, D.E., Costain, C.H., Strom, R.G., Pineda, F.J., Delvalle, J.P., Schnopper, H.W. **90**, 283
- HR 976 and 4 C 34.13: An X-ray Odd Couple
Cash, W., Snow, T.P., Jr. **91**, L7
- Dipole Confined by a Disk
Kundt, W., Robnik, M. **91**, 305
- Galactic X-ray and Gamma-ray Emission and the Nature of the Interstellar Electron Spectrum
Protheroe, R.J., Wolfendale, A.W. **92**, 175
- X-ray Characteristics of Loop I and the Local Interstellar Medium
Davelaar, J., Bleeker, J.A.M., Deerenberg, A.J.M. **92**, 231
- X-ray Clusters and the Electromagnetic Spectrum of Galaxies
Benford, G., Cavallo, C. **93**, 171
- High-energy Inverse Compton Gamma Rays from Cyg X-3 and Cir X-1?
Schlickeiser, R. **94**, 229
- High-energy X-ray Observations of Extragalactic Objects
Pietsch, W., Reppin, C., Triemper, J., Voges, W., Lewin, W., Kendziorra, E., Staubert, R. **94**, 234
- Classification of Cosmic Sources: A Statistical Approach
Giovannelli, F., Coradini, A., Lasota, J.P., Polimene, M.L. **95**, 138
- Predictions of the X-ray Emission of YY Orionis Stars
Mundt, R. **95**, 234
- Stellar X-ray Emission as a Consequence of Magnetic Activity
Belvedere, G., Chiuderi, C., Paternò, L. **96**, 369
- Cyg X-1: A Massive Neutron Star?
Goldman, I. **97**, 219
- Constraints to the QSO Contribution to the X-ray Background
Cavaliere, A., Danese, L., de Zotti, G., Franceschini, A. **97**, 269
- High-resolution Spectrophotometry of the "Low-excitation" X-ray Galaxies NGC 1672 and NGC 6221
Véron, M.P., Véron, P., Zuiderwijk, E.J. **98**, 34
- Millimeter-wave and X-ray Observations of a Cen-A Flare
Kaufmann, P., Strauss, F.M., Coe, M.J., Carpenter, G.F. **100**, 189
- New Models for the Intracluster Gas
Cavaliere, A., Fusco-Femiano, R. **100**, 194
- A Photometric Study of 2A 0526-328
Motch, Ch. **100**, 277

- Simultaneous Five Colour Photometry of the Double Period Optical Pulsar H 2254-033
Moitch, C., Pakull, M.W. **101**, L9
- On the Maximum Luminosity in X-ray Bursts
van Paradijs, J. **101**, 174
- The Optical Counterpart of A0538-66
Pakull, M., Parmar, A. **102**, L1
- NGC 4507: A Weak Seyfert I and X-ray Galaxy
Véron, P., Véron, M.P., Zuiderwijk, E.J. **102**, 116
- Stellar Dynamo and the Galactic X-ray Sources
Belvedere, G., Molteni, D. **102**, 283
- The Stability of the Pulse Intensity of the X-ray Pulsar in the Crab Nebula
Meidav, M., Sadeh, D. **103**, 367
- Spectral and Polarization Characteristics of the Supernova Remnant CTA 1
Sieber, W., Salter, C.J., Mayer, C.J. **103**, 393
- X- and γ -ray Superfast Photometry
Bonazzola, S., Chevreton, M. **105**, 1
- Differential Rotation, Magnetic Activity and X-ray Emission of Late Type Giants
Belvedere, G., Chiuderi, C., Paternò, L. **105**, 133
- On the Absence of Coronal Line Emission from Orion Population Stars
Gahm, G.F., Krautter, J. **106**, 25
- An Assessment of the Detectability of X-ray Emission from Winds in Active Galactic Nuclei and Quasars
Beltrametti, M., Drew, J. **106**, 153
- Hard X-ray Emission (15-150 keV) from the Region of 4U 0515+38
Ubertini, P., Bazzano, A., La Padula, C., Polcaro, V.F. **106**, 174
- Some Remarks on the Spectra of X-ray Bursts
van Paradijs, J. **107**, 51
- On the Possibility of Observing Iron Line Emission from the Surface of Magnetized Neutron Stars
Yahel, R.Z. **109**, 1
- Optical Investigations of Two X-ray Clusters of Galaxies: 0430.6-6133 and 0626.7-5426
Materne, J., Chincarini, G., Tarengi, M., Hopp, U. **109**, 238
- The Effects of Non-equilibrium Ionization on the X-ray Emission of Supernova Remnants
Gronenschild, E.H.B.M., Mewe, R. **110**, 180; **48**, 305
- Radio and X-ray Observations of the Abell 2241 Galaxy Clusters
Bijleveld, W., Valentijn, E.A. **111**, 50
- Radio and X-ray Galaxies in Abell 566
Harris, D.E., Robertson, J.G., Dewdney, P.E., Costain, C.H. **111**, 299
- Super-critical X-ray Luminosities: The Structure and Stability of a Radiation-supported Plasma Layer
Wang, Y.-M. **112**, 24
- Search for (Globular) Clusters in M 31. III. Structural Properties: X-ray Sources and Comparison with Galactic Globulars
Battistini, P., Bónoli, F., Buonanno, R., Corsi, C.E., Fusi Pecci, F. **113**, 39
- X-rays from a Peculiar Nucleus Galaxy NGC 2196
Agrawal, P.C., Singh, K.P. **113**, 73
- Bulge X-ray Sources and Novae in M 31
Vader, J.P., van den Heuvel, E.P.J., Lewin, W.H.G., Takens, R.J. **113**, 328
- NGC 1961: Stripping of a Supermassive Spiral Galaxy
Shostak, G.S., Hummel, E., Shaver, P.A., van der Hulst, J.M., van der Kruit, P.C. **115**, 293
- Fast Coherent Oscillations in Variable X-ray Sources and Bursters
Livio, M., Bath, G.T. **116**, 286
- The spatial distribution and spectral characteristics of the diffuse soft X-ray background
Singh, K.P., Agrawal, P.C., Manchanda, R.K., Naranan, S., Sreekantan, B.V. **117**, 319
- GX339-4: X-ray spectra of high and low states
Ricketts, M.J. **118**, L3
- Coulomb bremsstrahlung and cyclotron emissivity in hot magnetized plasmas
Nagel, W., Ventura, J. **118**, 66
- Self-consistent models of flare heated solar chromospheres
Fang, C., Hénoux, J.C. **118**, 139
- The contribution of quasi-stellar objects to the cosmic X-ray background
Narlikar, J.V., Burbidge, G. **118**, 154
- The relationship between soft X-rays and the 1640 Å feature fluxes in late-type stars
Rego, M., Gonzalez-Riestra, R., Fernandez-Figueroa, M.J. **119**, 227
- Emissions from the transition regions and coronae of three cool dwarf stars
Fernández-Figueroa, M.J., de Castro, E., Rego, M. **119**, 243
- Helium cyclotron emission from accreting magnetized neutron stars
Apparao, K.M.V., Chitre, S.M. **121**, L1
- Accretion onto rotating, magnetic neutron stars: the inner edge of the disk
Anzer, U., Börner, G. **122**, 73
- X-ray observations of radio-jet galaxies
Miley, G.K., Norman, C., Silk, J., Fabbiano, G. **122**, 330
- Non-thermal phenomena in the atmosphere of hot subdwarfs: X-ray upper limit for BD-3°2179
D'Antona, F., Rossi, L., Viotti, R. **122**, 339
- The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. I. New Westerbork observations of 22 cD galaxies and Einstein observations of A 1918 and A 2317
Bijleveld, W., Valentijn, E.A. **125**, 217
- The trivariate (radio, optical, X-ray) luminosity function of cD galaxies. II. The fuelling of radio sources
Valentijn, E.A., Bijleveld, W. **125**, 223
- Detection of an extended soft X-ray source H 2326-79 in the southern sky
Agrawal, P.C., Riegler, G.R., Singh, K.P. **126**, 70
- The X-ray emission of the old Nova V 603 Aquilae (1918)
Drechsel, H., Rahe, J., Seward, F.D., Wang, Z.R., Wargau, W. **126**, 357
- A hard X-ray imaging experiment using a coded mask telescope prototype
Cardini, D., Badiali, M., Emanuele, A., Farina, G., Gianni, G., Ranieri, M., Catanesi, M.G., Maggi, G., Selvaggi, G., Waldner, F. **127**, 169
- Low state hard X-ray emission from A0535+26
Polcaro, V.F., Bazzano, A., La Padula, C., Ubertini, P., Manchanda, R.K. **127**, 333
- Stellar collapse, pulsars, and globular clusters
Katz, J.I. **128**, L1
- X-ray Radiation, solar**
- Models of Temperature Distribution in an X-ray Solar Flare
Landini, M., Monsignori Fossi, B.C. **72**, 171

Principal Component Analysis of Solar Flares in the Soft X-ray Flux

Teuber, D.L., Reichmann, E.J., Wilson, R.M. **80**, 218

Plasma Flow along Sheared Magnetic Arches within the Solar Corona

Glencross, W.M. **83**, 65

Horizontal Distribution of the X-ray Energy Deposit in the Chromosphere and H α Two Ribbon Flares

Hénoux, J.C., Rust, D. **91**, 322

X-ray, EUV, and Centimetric Observations of Solar Active Regions: an Empirical Model for Bright Radio Sources

Pallavicini, R., Sakurai, T., Vaiana, G.S. **98**, 316

Relationship Between a Soft X-ray Long Duration Event and an Intense Metric Noise Storm

Lantos, P., Kerdron, A., Rapley, G.G., Bentley, R.D. **101**, 33

Thermal Radio Emission of Solar Active Regions Derived from Quantitative Analysis of Skylab X-ray Pictures and Compared with Observation

Elwert, G., Villing, W., Vorpahl, J., Broussard, R.M. **101**, 150

Average Properties of Low-mass X-ray Binaries

van Paradijs, J. **103**, 140

Atomic Calculation for Fe XXIII, UV, and X-ray Lines

Bhatia, A.K., Mason, H.E. **103**, 324

About the Relation Between Radio and Soft X-ray Emission in Case of Very Weak Solar Activity

Fürst, E., Benz, A.O., Hirth, W. **107**, 178

Chromospheric Effects of XUV Radiation Emitted During Solar Flares

Machado, M.E., Hénoux, J.C. **108**, 61

Impulsive and Gradual Hard X-ray Sources in a Solar Flare

Vilmer, N., Kane, S.R., Trottet, G. **108**, 306

Modification of the Ionization Balance of the Upper Chromosphere Due to XUV Irradiation in Flares

Chambe, G. **113**, 31

Dielectronic satellite spectra of Mg XI with inner-shell and helium-like excitation rates. Application to solar observations

Faucher, P., Loulergue, M., Steenman-Clark, L., Volonté, S. **118**, 147

The effect of precipitation on diagnostics for electron trap models of solar hard X-ray bursts

MacKinnon, A.L., Brown, J.C., Trottet, G., Vilmer, N. **119**, 297

Atomic calculations for Ca XVII; UV and X-ray lines

Bhatia, A.K., Mason, H.E. **121**, 163; **52**, 115

The thermal evolution of resonantly heated coronal loops

Martens, P.C.H., Kuin, N.P.M. **123**, 216

X-ray Spectroscopy

Analysis of X-ray Line Spectra From a Transient Plasma Under Solar Flare Conditions. II. Rate Coefficients

Mewe, R., Schrijver, J., Sylwester, J. **86**, 268; **40**, 323

Analysis of X-ray Line Spectra from a Transient Plasma Under Solar Flare Conditions. III. Diagnostics for Measuring Electron Temperature and Density

Sylwester, J., Mewe, R., Schrijver, J. **86**, 268; **40**, 335

Heliumlike Ion Line Intensities IV. Z-dependence of Collision Strengths for $n=2 \rightarrow n=1$ Transitions in Helium- and Hydrogen-like Ions

Mewe, R., Schrijver, J., Sylwester, J. **87**, 55

The Bragg Reflection Integral for Potassium Acid Phthalate

Lewis, M., Maksym, P.A., Evans, K.D. **87**, 213

Analysis of X-ray Line Spectra from a Transient Plasma under Solar Flare Conditions. I. General Outline

Mewe, R., Schrijver, J. **87**, 261

Erratum: The Bragg Reflection Integral for Potassium Acid Phthalate

Lewis, M., Maksym, P.A., Evans, K.D. **97**, 218

On the Transfer Equation for the Cyclotron Line in Her X-1

Melrose, D.B. **101**, 284

Calculated X-Radiation from Optically Thin Plasmas IV. Atomic Data and Rate Coefficients for Spectra in the Range 1-270 Å

Mewe, R., Gronenschild, E.H.B.M. **101**, 417; **45**, 11

Atomic Calculation for Fe XXIII, UV, and X-ray Lines

Bhatia, A.K., Mason, H.E. **103**, 324

Observation of Hard X-rays Line Emission from Her X-1

Polcaro, V.F., Bazzano, A., La Padula, C., Ubertini, P., Vialto, G., Manchanda, R.K., Damle, S.V. **108**, 249

The Solar Spectrum of O IV, Including Photoexcitation by Fe IX 171.07 Å

Kastner, S.O. **108**, 361

Soft X-ray Filter Spectroscopy of the Supernova Remnants Vela X and Puppis A

Burkert, W., Zimmermann, H.U., Aschenbach, B., Bräuninger, H., Williamson, F. **115**, 167

Dielectronic satellite spectra of Mg XI with inner-shell and helium-like excitation rates. Application to solar observations

Faucher, P., Loulergue, M., Steenman-Clark, L., Volonté, S. **118**, 147

Atomic calculations for the Fe XX X-ray lines

Mason, H.E., Bhatia, A.K. **121**, 164; **52**, 181

Observations of the iron emission lines in the X-ray spectrum of the supernova remnant Cassiopeia A

Manzo, G., Peacock, A., Taylor, B.G., Andresen, R.D., Culhane, J.L., Catura, R.C. **122**, 124

YY Orionis Stars

The YY Orionis Stars in the Chamaeleon T-Association

Appenzeller, I. **71**, 305

UBV Photometry of T Tauri Stars and Related Objects

Bastian, U., Mundt, R. **73**, 365; **36**, 57

Spectroscopic and Photometric Variations of the YY Orionis Star S CrA

Mundt, R. **74**, 21

The Satellite-UV Spectrum of S CrA

Appenzeller, I., Wolf, B. **75**, 164

Spectral Line Formation in Axisymmetric Moving Envelopes: Method and Application to YY Orionis Stars

Bertout, C. **80**, 138

UBV Photometry of Young Emission-line Objects

Kundt, R., Bastian, U. **82**, 394; **39**, 245

Spectroscopic Evidence of Strong Mass Flow Variations in the Envelope of the T Tauri Star DR Tau

Appenzeller, I., Krautter, J., Smolinski, J., Wolf, B. **86**, 113

Electron Scattering in the Infalling Envelope of the Protostar S CrA

Stahl, O., Wolf, B. **90**, 338

Predictions of the X-ray Emission of YY Orionis Stars

Mundt, R. **95**, 234

YY Orionis Line Profiles in the Spectrum of RW Aurigae

Appenzeller, I., Wolf, B. **105**, 313

S CrA and CoD - 35° 10525, Two Bright Young Stars

Bertout, C., Carrasco, L., Mundt, R., Wolf, B. **107**, 412; **47**, 419

Spectral line profiles from spherical shells

Wagenblast, R., Bertout, C., Bastian, U. **120**, 6

Zeeman Effect, see Magnetic Field

Zodiacal Light, see also Interplanetary Matter

The Zodiacal Light from 1500 Å to 60 Micron Mie Scattering and Thermal Emission

Röser, S., Staude, H.J. **71**, 269

Colour and Polarization of the Zodiacal Light from the Ultraviolet to the Near Infrared

Pitz, E., Leinert, G., Schulz, A., Link, H. **74**, 15

Ultraviolet Observations of the Zodiacal Light from the D2B-Aura Satellite

Maucherat-Joubert, M., Cruvellier, P., Deharveng, J.M. **74**, 218

Zodiacal Light and Local Interstellar Dust: Predictions for an Out-of-ecliptic Spacecraft

Giese, R.H. **77**, 223

The Plane of Symmetry of Interplanetary Dust in the Inner Solar System

Leinert, C., Hanner, M., Richter, I., Pitz, E. **82**, 328

A New Model for Scattering by Irregular Absorbing Particles

Chiappetta, P. **83**, 348

Absolute Photometry of Zodiacal Light

Levasseur-Regourd, A.C., Dumont, R. **84**, 277

A Comet Fragment Model for Zodiacal Light Particles

Greenberg, J.M., Gustafson, B.A.S. **93**, 35

Erratum: A Comet Fragment Model for Zodiacal Light Particles

Greenberg, J.M., Gustafson, B.A.S. **98**, 422

The Zodiacal Light from 1.0 to 0.3 A.U. as Observed by the Helios Space Probes

Leinert, C., Richter, I., Pitz, E., Planck, B. **103**, 177

On the Definition of Albedo and Application to Irregular Particles

Hanner, M.S., Giese, R.H., Weiss, K., Zerull, R. **104**, 42

Stability and Symmetry of Zodiacal Light Polarization in the Antisolar Hemisphere

Leinert, C., Planck, B. **105**, 364

Stability of the Zodiacal Light from Minimum to Maximum of the Solar Cycle (1974-1981)

Leinert, C., Richter, I., Planck, B. **110**, 111

Search for Short Term Variations of Zodiacal Light and Optical Detection of Interplanetary Plasma Clouds

Richter, I., Leinert, C., Planck, B. **110**, 115

Helios Zodiacal Light Measurements - a Tabulated Summary

Leinert, C., Richter, I., Pitz, E., Hanner, M. **110**, 355

A Scattering Model for the Zodiacal Light Particles

Schiffer, R., Thielheim, K.O. **116**, 1

Optical properties of interplanetary dust: comparison with light scattering by larger meteoritic and terrestrial grains

Weiss-Wrana, K. **126**, 240

ZZ Ceti Stars

BD + 33°2642: A Galactic Halo Blue Star Observed by IUE

Stalio, R., Franco, M.L. **84**, 369

G 255-2: A New ZZ Ceti Variable Star

Vauclair, G., Dolez, N., Chevreton, M. **103**, L17

Identification of gravity modes in the newly discovered ZZ Ceti variable GD66

Dolez, N., Vauclair, G., Chevreton, M. **121**, L23

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